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Improving College and University Teaching

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FEATURING ARTICLES ON COLLEGE TEACHING
WRITTEN BY COLLEGE TEACHERS

DELMER M. GOODE, *Editor*

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The Editor's Uncasy Chair

Mediocrity does not mean worthlessness, merely lack of distinction. Once it was no more disparaging than to order one's steak "medium."

It is being merely candid to admit that our teaching is largely mediocre. Truly enough, no one can be brilliant all the time.

We do an honest teaching job, keeping up in our subject, planning our courses, preparing our daily task, arriving and dismissing on time, reading and returning papers and tests, attending to all other routine duties. We teach in no startling manner but as we are accustomed to doing it and as our students, who sit under many teachers, accept as average. Mediocre perhaps, but blameless.

Yet "teacher," "doctor," and "master" all connote something better. Routine functions probably could be, in time may be, done by machines. What is it that the "master" and no machine must do?

Facts and skills can be mechanically inculcated. Attitudes, principles, meanings flow only from master to student because they are a part of human experience. Minds and hearts must touch. A recent writer, praising good teachers, asked, "Whenever has knowledge been enough for a teacher? There must be generosity, the gift of articulation, and the power to elicit enthusiasm. These are the gifts of the great teacher." (John Ciardi, *Saturday Review*, July 8, 1961, page 28.) He then described the teacher at his best: "What I can see yet is his finger. He would hold the manuscript I had given him to read, we would both look at it, and then his finger would begin to weave, hovering over the page in slow figure-eights, slowly, slowly—and then pouncing down. And by whatever magic he worked, I always knew where it was going to land before it landed, and why it was going to land there! Don't ask me how: I don't know. But it was teaching. It was great teaching."

This description has universal meaning for teaching. Let none of us rest content until we can point for every student the central or highest significance of what we teach. DMG

"Watcher of the Skies"

A GARDENER will toil through spring and summer, spading, sowing, fertilizing, troweling, spraying, dusting, watering, pruning, and training his plantings, with a song in his heart through all his labors, and whenever he stops to look at his garden he will rejoice in its life and beauty.

Should not a professor, dealing with young human minds and hearts know joy far beyond that of a gardener? Nothing else made by either God or man can compare with human personality in potential, in challenge. A teacher's task assuredly is the highest of callings, the richest in satisfactions.

Each individual student is different. Each class group is different. The steady unfolding of human talent, interest, and purposeful activity, stimulated and guided by the teacher, is inspiring to be near to. A teacher need never grow old, working intimately with vigorous youth.

"He must not only communicate ideas," says Frederick Mayer, "but he must be a representative of a creative way of life, a symbol of peace and serenity in a world which is troubled and tortured. Thus, he becomes the guardian of civilization and the protector of progress."

In this noble role he may live in a never-ending adventure of the mind, an adventure like a journey full of moments of enjoyment, descending at times to valleys of tranquil beauty and mounting occasionally to peaks of commanding view. The needs and interests of his students, awakened or brought into focus by him, revealed by their comments and questions, are a constant stimulation to him. And unexpected,

unpredictable flashes of insight on the part of either teacher or students may occur as when Cortez and his men "stared at the Pacific, looked at each other with a wild surmise, silent." Such an experience in the classroom is something to remember, and indeed it will be remembered.

It must be admitted that what goes on as teaching-learning does not always meet the criterion. Is not too much of our teaching a sort of sideline? We think of our specialty as our primary concern and let our teaching take care of itself. We lecture, we prescribe and watch over laboratory routine, we give and grade tests. These appear to pass for teaching with students and in the profession.

Meanwhile we look to our research and scholarly writing for our real professional satisfactions. Physical phenomena, organic life, humanity, in all their fascinating complexity and

mystery lure us on into deeper and deeper studies, promise us rare thrills of discovery, reward us sometimes with the intoxication of breathing the air of some new frontier. Who would not like to be a "watcher of the skies when a new planet swims into his ken"?

But since we teach, why not find more thrills in our classroom? We could learn from some of the allegories. Maeterlinck's children, after all their wanderings, found the blue bird right at home. Sir Launfal sought the symbol of life's highest good over land and sea, but only found it at last at his own castle gate. A professor's classroom is his castle. What if he should find that in it could be his most enduring joy?

DMG

NUMINOUS MOMENTS

"One thing is certain; the educational effect is not produced by the inspired efforts of one man—the maestro, the magician, the impresario, the instructor. Though he helps to generate the atmosphere conducive to the discharge of the electricity of thought, he is only a catalytic agent. There is the subject he is supposed to teach and there are the students sitting before him. Without their active collaboration, his best educational endeavors would be thwarted. With their aid—and it is usually given generously—the process is not only accelerated but intensified."

CHARLES I. GLICKSBERG
Numinous Moments in the Classroom.
Improving College and University Teaching. Summer 1960. Page 103.

The College Teaching Profession

The 1960 annual meeting of the Pacific Northwest Conference on Higher Education was devoted to the theme "Improving Teaching in Colleges and Universities." A comprehensive address by a distinguished professor (B.A., M.A., Northwestern; Ph.D., Harvard) was a feature of the program and is here presented with the approval of the author and the Conference.

By R. F. ARRAGON

IN DISCUSSING college teaching in the light of the idea of a profession, I am entertaining such questions as: Is college teaching a profession or only an occupation? Does being professors make us professionals? In what sense are we as teachers members of a profession? What does such a profession mean for us as teachers? I can begin only by asking. What is a profession?

I have consulted dictionaries, including the New English Dictionary, and at least one discovery has not been helpful, that the term could be extended to fit "any occupation." I am in pursuit of some distinctiveness, and therefore before going ahead with dictionaries tentatively suggest some criteria such as the following: standards of preparation and performance; individual responsibility in satisfying the obligations of the occupation (that is, independence in decision and action); a group or guild as the collective embodiment of the common responsibility and of an established vocation with a past and a future; and one other point of equal or greater importance, theory as well as practice. The last criterion is sometimes phrased as the requirement of mental as well as manual activity and equipment, but this is not explicit enough. There are mental as well as manual skills that take little thought and may be learned and exercised by routine. I mean a systematic body of ideas as well as a set of techniques. The painter in the 14th and 15th century Italy wanted painting to be recognized on similar grounds not only as a separate art or craft (separate from the physicians' and apothecaries' guild) but as a liberal art.

Returning to the New English Dictionary and a Latin dictionary for whatever support they may give, we find that "profession" and "professor" as ancient terms anticipated modern usage and modern ambiguities. "Professor" and "to profess" (*profiteri*) meant in postclassical Latin of the 1st century A.D. "teacher" and "teaching" as they did in England of the early 17th century, though "profession" meant earlier in classical Latin and in early 16th century English, as already pointed out, any occupation, such as business or husbandry. The development is easy to understand if we go to the root meaning in Latin, a "public declaration" of person, name, property, business, and the like, i.e., a legal act. Hence it came to mean a public manifestation for clients or pupils, of medicine or of magic arts, of grammar or of philosophy,

i.e., the public practice or teaching of such activities. In 16th century English, "profession" was most likely to refer to one of the learned professions, medicine, law and divinity, or to that of soldiering. It included teaching the learned professions (Luther professing divinity at Wittenberg) and the liberal arts (at least by 1611). We should recall the title "doctor" in these learned professions as originally granted in recognition of capacity to teach one of them. Divinity reminds too of the special use of "to profess" in Christianity as publicly to declare one's faith and particularly to take a vow such as a monastic one, a meaning which adds the sense of responsibility to God and indeed of a "calling" to the sense of legal or moral obligation in the original Latin idea of public avowal. It would be chasing etymological rabbits too far to look for a connection between the idea of vocational commitment by college professors and the fact that their medieval predecessors were members of the clerical estate. The ambiguity of importance for us now is in the use of "profess" for practicing or teaching an intellectual discipline more usually than for simply teaching. This is still with us.

The pursuit of this ambiguity can be assisted, I think, by cursory examination of the present widespread concern about the teaching profession among college administrations and faculties, in government and in the country at large, a concern over a crisis or really over two crises: the predicted explosion in student numbers and the lag in the provision of teachers on the one hand and on the other the need of scientific man power. These have different origins, but they cannot be considered in isolation. Indeed, population increase, as well as defense, poses a long-run problem of the efficient use and expansion of natural resources even in an "affluent society." Not only does man power accentuate the need of more teachers to produce it, but the use of it for research competes with teaching. It demands more pure and applied natural science, psychology, mathematics, languages, sociology, and perhaps other social sciences. The immediate anxieties for the teaching profession are how it can meet the potential scarcity and what effect the remedies will have on it. The discovery of remedies has been the concern of foundations and of administrations and to some extent of faculties. Teachers have been anxious about effects, but the not particularly novel danger of quantity submerging quality and the need for both are sobering qualifications for all parties, especially so in view of the demands for specialized man power.

The remedies fall into two classes: increased supply of teachers and the stretching of their

present capacity (i.e., increase of production per teacher). The measures proposed cannot be evaluated here, but a summary of them may suggest points of relevance for the nature and problems of college teaching as a profession. Increase in the number of teachers not only absolutely but relatively would be hoped for by the recruitment of a larger proportion of college graduates into graduate schools of arts and sciences and by the more efficient production, in time and in money, of finished products of graduate school. Teachers will find the attractive features and the sore points of their occupation defined in the measures for recruitment, both in the propaganda, such as the favorable but moderate pamphlet of the American Council on Education on college teaching, and in the efforts to improve the conditions of teaching and of research in respect to salaries, sabbaticals, research grants, and teaching loads. The current examination of graduate study by the administrations and faculties of graduate schools, by special inquiries supported by foundations, such as Bernard Berelson's and that of the National Opinion Research Center, and others carried on by learned societies, such as the American Historical Association, is raising questions and providing data vital for understanding the condition of the profession: What causes young men and women to decide for teaching? Does graduate education encourage or discourage this decision? What is the relevance of the Ph.D. and the research dissertation to teaching? Is the degree necessary for getting and keeping a job? Should graduate education be more systematically directed towards teaching as a goal so that students may become better teachers sooner? Or should this be done on the job? I am not sure of the answers. Probably I shall not be when the data are in, but I have some hunches that I shall refer to later.

Stretching the existing capacity to produce more student-classhours per teacher with a higher faculty-student ratio and, if possible, a lower unit cost has naturally aroused more concern among college faculties than have measures to increase the supply. The efforts to make the conditions of teaching more attractive might be nullified by the reversal of the widespread decline of teaching loads, especially in universities where the decline has been most marked and where student registrations have already been rapidly rising. The effectiveness of teaching might (I do not say, will) be threatened by the increase in the size of classes with or without the aid of TV and other mechanical devices, by the increased

use of student and graduate assistants and of part-time lay teachers, and by insufficiently directed independent study. Teaching loads might be increased not by an increase in the work loads of professors but by a redistribution of time among the competing demands, i.e., at the expense of faculty participation in educational administration and of the steadily increasing departmental and contract research. Several of these possibilities present problems important for the work and the professional status of the faculty members, to say nothing of the provision of skilled man power for the advancement of knowledge on all fronts.

I shall return to some of these points later. I am concerned now rather with the attitude of faculty towards such proposals in general, indeed towards the needs that they are supposed to meet. Do we as teachers have a common constructive concern with these matters as I think we professionally should have? Or are we resistant and on the defensive or simply indifferent? The evidence offered by the experience of the American Association of University Professors is mixed. (I speak of course not for Committee C on Teaching, Research and Publication, of which I am chairman, or in any other official way for the Association.) The warm espousal of academic freedom, educational equality, and freedom of thought bespeaks a professional spirit. Occupational interests such as security of tenure and advancing salaries and fringe benefits secure eager attention at annual meetings. There is occasional concern for responsibility in the determination of educational and personnel policy and for such conditions of teaching as work loads, sabbatical leaves, subsidies to attend meetings of learned and other educational societies and to carry on and to publish research, and the criteria for promotion and tenure; but the concern is local and not widespread, except perhaps in the case of loads. Almost no interest has been aroused by Committee C in the improvement of teaching. Perhaps this is our fault, but it is more likely that such interest is individual and local and that nothing in this line is expected or sought from the profession. We are loath to take any initiative that might suggest that each of us does not have a right to conduct his classes as he wishes. I subscribe to the principle, but should we leave to administrations, foundations, and National Education Television, the experimentation with and evaluation of TV or of independent work?

We do not have to be sanguine about these and other remedies for student numbers and academic finances (I am not), but are we sure they have nothing to offer in special ways for the improvement of teaching? What proposals do we have, if we are really interested in teaching? Is our concern with earning a secure and comfortable living or with teaching as a way of life, i.e., as a profession? Where do our loyalties lie?

¶ That they lie with our subject matters or disciplines is suggested by items of faculty interest already referred to, videlicet sabbaticals and subsidies for research and publication. It might be argued that, since relatively little publication (and probably little completed research) is actually done by college and university faculty members whether they are Ph.D.'s or not, this interest is essentially not a burning desire to contribute to one's field but a concern for one's job in view of the much advertised requirement for promotion and tenure and for getting ahead in the profession. I doubt the justice of such reasoning, but even if it were true it would reflect a widespread opinion that research and recognition in one's field are the important qualifications for advancement. A similar conclusion is to be drawn from the anxiety for travel funds unrestricted to the home state, since the use of these is mostly for getting to meetings of the societies of the various disciplines (scientific and scholarly) or other meetings where one's specialized research (e.g., sociological or psychological) can contribute to the discussion of educational problems. (A large proportion of articles on teaching is written by professors of education, psychology, and sociology.) It is at our subject-matter conventions that we meet colleagues who can talk our language and can help us to get ahead. Here we can read papers or evaluate them, be put up for auction in the slave market or look over the likely candidates for jobs. Here university and college faculties mix. Here graduate study, professional recruitment, standards and purposes of higher degrees may be discussed and faculty members' inquiries into such matters initiated. Professional interest in the qualifications for admission to the guild is evident. These associations do not codify standards and certify college teachers; no one does, perhaps fortunately, in a fashion comparable to that practiced in the medical and legal professions. But the disciplines have influence, primarily with regard to scholarly and scientific activity, an emphasis upon research

and the exposition of its findings as the increase of knowledge. Potential teachers seek and are interviewed for jobs as teachers; but their standing in the discipline and the kudos of their departments and teachers depend largely on their reading and publishing papers, which may grow into books. This is what they have been prepared to do in advanced graduate study in the methods of inquiry and in individual and team research. Rarely at the association meetings are problems of undergraduate instruction dealt with. (At least one discipline [physics] has a special society for teachers.) This situation is not surprising and is in accordance with early usage of "profession." We *profess* not in a void, but history or chemistry or the dance or education. No wonder some observers, such as Berelson, speak of the *professionalizing* of teaching as the absorption of the teacher in the business of his field, i.e., of research whether in or out of colleges and universities.

I have now returned to the competition of research with teaching already mentioned, i.e., to what has been going on in graduate schools (surely the story of the graduate student who wanted to teach but was advised that he was too good to teach is not purely apocryphal), in university departments and even in liberal arts colleges, to say nothing of research institutes connected with universities or set up by industries or by corporation laboratories. (We might add an increasing number of post-doctoral and faculty fellowships, including institutes for advanced study.) In the sciences a high proportion of graduate students go into exclusively research jobs, and the proportion in psychology and sociology, perhaps in the other social sciences, is increasing. In the humanities, the scholarly interest may be as strong, but its competitive value is not as great! Salaries and graduate professors may be important factors in such decisions to meet the manpower shortage directly, but there is evidence that curiosity about subject matter was a primary motive for entering graduate school. John Gustad (in his study for the Southern Regional Education Board) has emphasized the drift from intellectual interest into teaching and the lateness of the final decision in favor of teaching. The idea of service to society seems active too, but is this a rationalization of intellectual curiosity (knowledge is useful) or a liking for people and desire to help them? I wonder whether the service motive as an interest in people correlates well with high performance

in a special field in college and graduate school. Further evidence on such questions may be forthcoming soon. The intellectual motivation is not surprising. It is in accord with the scholarly and scientific orientation of higher education. Shall we therefore conclude that loyalty begins and continues primarily towards the discipline and that research competes on more than even terms with teaching?

Both teaching and research may be embraced, however, in a third loyalty or solidarity, and this may indeed outrank the other two or at least match the force of the discipline in the closeness of relations with one's fellows and of pressure from the group. In the academic community of the college or university are focussed the immediately compelling and practical functions and interests of teachers and researchers of whatever department. Here professional qualifications and performance are judged and membership and status determined not only in the particular community but in the teaching profession and even in considerable measure in the special disciplines. Such judgment and determination by academic communities of who shall be teachers, scholars, and scientists begin actually much earlier in the career of these professionals. At the undergraduate level, the A.B. is at least a prerequisite, and our standards for undergraduates and their application in the appraisal of graduates are a necessary if not a sufficient condition for pursuing graduate education. Success in this education is then judged by members of the university academic community. They mark the progress and, in fact, grant the Ph.D. Departmental autonomy is usually great, and the pattern is akin to that of apprenticeship and admission to the local guild on presentation of a masterpiece not of teaching but of research, as is in keeping with emphasis on the mastery of and addition to knowledge in a special field to which I have already referred. Yet that standards and procedures present common problems and should be considered by graduate faculties or committees broader than single departments is recognized by the concern of deans and faculties to evaluate their graduate programs. Such, then, is or should be the responsibility of professional teachers and scholars in the conduct of an intellectual community. Similar responsibility at other levels, including the undergraduate college, is normally recognized, for curriculum, academic standards, admission, degrees, and other matters of educational policy, what-

ever Mr. Ruml and a few board members may have thought. It is general by practice and, in some cases, including one or more state universities, by statute.

Should not further responsibility of a college or a university as an academic community be in the hands of its faculty members as professionals in the sense which I sketched at the opening of this discussion, responsibility, for instance, for determining the criteria for membership and status in their community and for participating in particular judgments? For thereby are the quality and temper of the community in the long run shaped. "The gradual professionalization of college and university teaching and the growth of a scholarly community of maturity and talent fully qualified to take an active and responsible part in institutional government" are noted in the last report of AAUP Committee T on College and University Government. Dean Ingraham of Wisconsin suggests even that faculties should hire administrations, of course to carry out faculty policies. Such autonomy does not seem likely, at least in the near future, in the face of the American tradition of boards of trustees (or for that matter in countries of centralized educational systems abroad); but a vital principle is thereby dramatically expressed. A professional community should have large if not complete responsibility for its particular purposes, standards, composition and effectiveness and leave to the individual member a wide discretion in the choice of means to its ends. Such participation encourages professional morale, self-discipline and dignity on the part of members of the community and of the teaching profession.

"An active and responsible part in institutional government" takes time, time for curricular committees, personnel committees, committees on academic standing, on library, and on much else, time and effort of which many complain but which few would abandon to officialdom. Committee work, departmental and divisional chairmanships, and the like form a third element in work loads, competitive with teaching and research and perhaps partly responsible, along with research, for the decline of teaching hours. Its importance was recognized by Professor Caplow of Minnesota in an unusual proposal (made at a recent conference on teaching loads) to pay college teachers per hour of teaching at a rate competitive with research for as many hours of teaching as each wanted (up to a limit). He

felt compelled to require, in addition and without pay, some administrative duties.

Such collaboration of faculty and administration encourages a linkage between them that is common abroad and here. Professors become administrators by the choice of colleagues or administrators or both. They become department heads or take charge of research programs, and some are made deans or presidents. This movement is going on constantly within the same institution or from one institution to another. It facilitates collaboration, but it also draws teachers away from membership in the teaching profession. As deans and presidents, they cease to be eligible for the AAUP and must withdraw from its committees. One of the incipient deans on resigning recently from Committee C expressed both regret and lack of comprehension. He does not yet see the fence between us. Will he and his faculty colleagues see it when he is on the other side of it? Perhaps he is right and it should not be there in the institution or in the profession. The cause is the obvious and traditional duality of the president's position, facing like Janus two ways (if not three in relation to the students as a third force). Many administrators of my committee colleague's sort continue to act as if they were colleagues, and it is well that they do. But can these relations be formal as well as personal? There is not only the AAUP. National organizations that link academic communities at the institutional level are primarily administrative, the Association of American Colleges, the Association of American Universities, the Association of Graduate Schools, and similar organizations. This follows from the setup of American institutions of higher education, and perhaps for the same reason is largely true of the American Council on Education. The National Education Association's division of Higher Education is in a different category, since its members are individuals, both administrators and teachers. For a variety of reasons, about which I can do little more than speculate, this enterprise has not caught on well. Prejudice against the parent organization, rivalry with the AAUP, nonacademic concerns of state educational associations, concentration on vast annual meetings with no continuing program vital for academic interests and ideals may help to explain the lack of consistent appeal to academic people, many of whom cannot be attracted to the AAUP. There are some super-disciplinary organizations that do attract the active participation of college professors and of administrators

too, if the latter have been able to keep up their scholarly and scientific activities. Two I know well, the American Council of Learned Societies and the Social Science Research Council, and there are others for the natural sciences. But these are sponsored by the appropriate learned societies, and do not cover the whole of the college teaching profession. Yet their programs oriented towards teaching and research bring me back to my initial inquiries about the nature and significance of that profession.

¶ The situation of a faculty member would seem to be a complex of professional responsibilities competing for attention and loyalty, responsibilities towards teaching and students, towards the discipline and fellow workers in it, and towards the academic institution and faculty colleagues. The competition is certainly at the book-keeping level and seems to be at the operating level. At these levels there is a diversity within the program of each of us and great differences between us (even if full-time administrators are not included). The competing activities reflect the competing purposes of universities and colleges. Actually the diversity of their purposes is much greater than I have indicated, purposes attributed to them by parents, students and alumni, and by government, industry, and the general public and effected with mixed feelings by administrations and faculties: the initiation of young people into our society and its culture for economic, social, moral and intellectual ends; contribution to technological, scientific and scholarly knowledge, and the preservation of such knowledge; technical service, entertainment, and occasional leadership. Perhaps these are not in principle fundamentally competitive and have something in common that would integrate them. What this might be is difficult to discover. We may be more successful if we reduce the diversity by asking what is distinctive about academic institutions in comparison with other institutions that also contribute to fulfilling various of these purposes. Academic communities are not distinctively trade schools, clubs or churches, or even public libraries, art museums, or industrial laboratories, though they may include some of these. They are concerned with the understanding, through reason and imagination tempered by reason, of the world and of man. Their common and distinctively pervasive activity is thought. Their distinctive kind of teaching is to encourage young men and women to think, their distinctive kind of

research is to add to the powers and reach of the mind, and their administrative responsibilities are distinctively to further such teaching and research.

I am subscribing to the role traditionally assigned to the university: to communicate and thus to preserve and to transmit the critically tested understanding of the world and man and the means by which it is arrived at, and to increase and to refine the understanding and the means. Cardinal Newman put this persuasively and excitingly a century ago in "The Idea of a University": "A University seems to be in its essence, a place for the communication and circulation of thought, by means of personal intercourse, through a wide extent of country." He elaborates the idea as follows:

... a University is a place of concourse, whither students come from every quarter for every kind of knowledge. . . . It is the place to which a thousand schools make contributions; in which the intellect may safely range and speculate, sure to find its equal in some antagonist activity, and its judge in the tribunal of truth. It is a place where inquiry is pushed forward, and discoveries verified and perfected, and rashness rendered innocuous, and error exposed, by the collision of mind with mind, and knowledge with knowledge. It is the place where the professor becomes eloquent, and is a missionary and a preacher, displaying his science in its most complete and most winning form, pouring it forth with the zeal of enthusiasm, and lighting up his own love of it in the breasts of his hearers.

This description does not separate teaching and research, communication and discovery. The Wisconsin dean whom I quoted a few minutes ago (a mathematician) supports this view. "We could attempt," he writes, "to create a university without students, but it would not last long in that state. The scholar wants to induct others into the fellowship of scholars. The discoverer must have someone to listen to his accounts." Some may say, this is all very well for a university professor with graduate students, but not for a college of liberal arts. But what are we teaching? Nothing more than information and techniques? And whom are we teaching? Merely regurgitators and technicians? We can at least hope and try to make them something more. It is the expectation of something more that keeps for us the excitement of teaching. I cannot imagine teaching without scholarly content, or scholarship (at least my kind) without students. But no more readily can I imagine teaching without aiming at the students' discovery of thinking and of inquiring for themselves. The spirit of

imaginative and critical inquiry on the part of the instructor is needed for this end. A discipline is taught, not simply its results. How we teach it determines how it is learned, or rather how we want it learned. Its meaning for us as inquirers, the excitement of discovery, the logic of its structure as knowledge affect the teaching, and research may in turn be encouraged by problems arising in such teaching. This is certainly true if the revision of the interpretation of historical data or a literary work or of the manner of presenting any subject matter is a function of research. There is not general agreement on the application of the term. Yet, however this may be, I conclude that communication and exploration cannot be divorced as functions of academic communities.

For the undergraduates studying history, for instance, I hold this view important not only for the future historical scholar and teacher but for other students too. The *fundamental* job of a historian in college (and, I suspect, in graduate school) is to teach not how to lecture or to write on history but how to think historically and by practice in that kind of thinking to know what the concept of history means. This, I hope, with Ortega, will go with a student whatever he does. Ortega puts the hope eloquently in *The Mission of the University*:

The man who does not possess the concept of physics (not the science of physics proper, but the vital idea of the world which it has created), and the concept afforded by history and by biology, and the scheme of speculative philosophy, is not an educated man. Unless he should happen to be endowed with exceptional qualities, it is extremely unlikely that such a man will be, in the fullest sense, a good doctor, a good judge, or a good technical expert. But it is certain that all the other things he does in life, including parts of his profession itself which transcend its proper academic boundaries, will turn out unfortunately. His political ideas and actions will be inept; his affairs of the heart, beginning with the type of woman he will prefer, will be crude and ridiculous; he will bring to his family life an atmosphere of unreality and cramped narrowness, which will warp the upbringing of his children; and outside, with his friends, he will emit thoughts that are monstrosities, and opinions that are a torrent of drivel and bluff.

Is Ortega however right? Recently C. P. SNOW and Robert Oppenheimer have questioned the *fact* and (in Oppenheimer's case) the *possibility* of mutual understanding on the part of the humanistic and scientific members of an academic community. Do they or can they (to say nothing of the students) understand each other's con-

cepts? The dichotomy is not unequivocally defined by such titles as "two cultures," "tradition and discovery," "science and common sense." They suggest, however, an antithesis in method and outlook that occasions a schism in the university. The word "discovery" conveys something of the experience, indeed of the exhilaration, of being on the "frontier" of knowledge. In Oppenheimer's view, this is remote, requiring an uncommon level of mathematical abstraction and a mode of interpretation so far from the language of material objects and events as to be inaccessible to most of us, including many scientists. This frontier is in the physical sciences and is moving into the life sciences, and perhaps into psychology, or the study of consciousness. It is not just specialization. It is a distinctive way of looking at and of mastering the world and its events.

The resulting division may crudely take the form of an exchange of complementary questions: Are humanities useful? Is science comprehensible? More significantly, the problem may be stated as that of the difference between traditional knowledge (i.e., what has become common sense) in the sciences as well as in the humanities and the rarified and novel air of the frontier. What bearing does this distinction have upon teaching and upon the relation between teaching and research? Especially if there is any truth in the principle that inquiry and communication are mutually dependent and in its corollary that students can learn the concepts (in Ortega's sense) only by using them as modes of thought. Two specific issues arise.

First, are the humanities disciplines of inquiry or only of tradition? That this is for me a rhetorical question must be clear. Snow and Oppenheimer would agree. For them not only is inquiry a characteristic of the European tradition, but the humanities are not buried in the past. Snow wishes a renewal of contact of scientists and engineers with humanists, and Oppenheimer is ever applying humanistic insights and values to present situations. I have already suggested that there is constant rediscovery and reinterpretation of the thought and art handed down to us. From this interaction of past and present result not only the renewal of tradition but fresh discovery and creation.

Secondly, is not general or liberal education in the sciences or at least in the new science impossible? If so, what passes for general education in this area is necessarily illusory, for how can the active, living concept (how you think on the frontier) be communicated? I do not know the answer, but I am not as pessimistic as Oppenheimer recently has been. Perhaps we shall catch up as we have in the past, and the new modes of thoughts may become accessible to more than the few. I hope so, for as professionals we should indeed grasp something of the concepts of other fields than our own so that we can have a picture of the state and structure of human intelligence. Perhaps I am saying that we should have a philosophic comprehension of what men's minds have done and can do.

But if the nature of the disciplines in some measure limits professional understanding in some areas, we can recognize that there is at least a common professional climate for all disciplines and for teaching and research. This comprises the conditions for inquiry, or the qualities of the open-ended life of the mind. I mean of course academic freedom but also that independence of mind that is rooted in the individual, the honesty and persistent curiosity that are the basis of responsible and imaginative scholarship and teaching. I shall not try to spell these out systematically. They are the corollaries of my recurring theme. Transmission (and preservation) of knowledge and fresh discovery are integral. So are teaching and inquiry.

Stallion

"Science in itself without the guidance of true humanism is like an unbridled stallion lacking reins. The quicker and craftier it is, the more dangerous."

DAGOBERT D. RUNES

Letters to my Teacher.

New York: Philosophical Library, Inc. 1961. Page 42.

Why Do We Teach?



Few questions are more fruitful than to ask oneself "Why do I teach?" The answer discloses one's level of professional performance as teacher. Here is the answer of a professor (B.A., Oberlin) who is author of books on learning and teaching, former reporter

for Life magazine, and a script writer.

By **ROGER H. GARRISON**

MUCH irrelevant nonsense persists in the public's mind about why teachers teach and even about what teachers, in fact, "do." For instance, there is a sentimental notion that for certain "psychic rewards," usually unspecified, a teacher nobly turns away from the material comforts that his abilities in a "practical" job might otherwise give him. Indeed, I have even heard well-meaning citizens argue seriously that because a teacher's major motives for working are obviously not monetary, then the other "rewards" could reasonably be considered part of the compensation.

Another widely held belief is that teachers are people who deserve gratitude (and therefore, illogically, more salary) for doing a necessary, almost an eleemosynary, job. (Since when has "gratitude" been an adequate argument for increased compensation?)

And, of course, there is the familiar Shavian barb: "He who can, does. He who cannot, teaches." And recently, an otherwise shrewd observer of the American social scene, William H. Whyte, Jr., said: "The Professor . . . is one who teaches you how to solve the problems of life which he has avoided by becoming a professor . . ."

These ideas are absurd. They are also patronizing and faintly indecent. They indicate a deep misunderstanding of the real reasons why capable people choose to be teachers—to say nothing of an equally profound misapprehension about the nature of teaching.

Why do teachers teach? The answer is simple: most of them teach because that is what they like to do. They teach because that is the yen or gift or talent in them that they must express. And a

teacher's "psychic rewards" are precisely similar to those of a good mechanic, scientist, businessman, or doctor: the rewards come from working at a job one has freely chosen because it gives scope to one's abilities; because it is self-fulfilling.

Of course it is distressing that teachers are paid less well than their more businesslike brethren. Obviously, teachers have gas bills, doctors' bills, and growing children to clothe, even as junior executives do. But the low academic salaries are due, not to the nature of teaching, but to general misunderstanding of what the job requires in professional skill and sheer human resource. Teachers don't need anybody's pity or gratitude. But they badly need more realistic public relations. *Most of all, they need to take the responsibility themselves to tell about their work as clearly and in as much persuasive detail as every other profession has managed to do.*

I am one of about 250,000 college teachers in this country. I like my work. Indeed, I am passionately committed to it. Yet if what I do is "appreciated," it is almost invariably for irrelevant reasons. Some of my nonprofessional friends have said that they think it was "wonderful" because, years ago, I resigned a promising business position to go into teaching. From the way they say it, I'm sure they consider my action an odd quirk in an otherwise normal guy. Others say they "envy" me my time to read and think and "withdraw from the hurly-burly." Parents of my students over the years have often said that they are "grateful" for what "you people have done for our children." Others have said, in effect, that they wish they, too, "could take time off from *real* work to do what you are doing."

I find this kind of thing frustrating and puzzling—and more than a little comic. People don't say this sort of nonsense to lawyers or doctors or even to ministers. They seem to save their sentimental and half guilty gratitude for teachers.

I reply as patiently as I can that I resigned a business position because I discovered I didn't like business. Anyway, I realized early in my working life that I would rather work directly with people than with processes. Besides, I liked to study. I say to these people that if I did not read and read and read, I would be dead in my profession, because real ideas do not come pre-packaged in Madison Avenue cellophane. And I

have to *try* to think because the whole commitment of my life obliges me to. (I don't find thinking any easier or more comfortable than anyone else does.) And I don't know why parents are "grateful"—because mostly I give my students (and myself) a hard time with the toughest intellectual and human problems I can propose; and then struggle with them as we search together for further and tougher questions. And as for "real" work, American adolescents are not notably disciplined or eager to work at hard intellectual jobs. Yet teachers are supposed to see that they do. Surprisingly, teachers sometimes succeed.

Further, no teacher seriously doubts the practicality and vital necessity of what he does. He works too closely with human stuff even to bother replying to the irrelevant taunt of the ivory tower. (Teachers are called upon in these times of continuing national emergency to produce both technological "progress" and an "enlightened citizenry." This simply demonstrates what any teacher knows anyway: that he is in an eminently practical business.)

It is puzzling, too, that although millions of our people are college graduates—and thus have presumably worked closely with teachers for years—few graduates have apparently seriously questioned or even cared about the motives of the people who once taught them. (It is this, as much as anything else, that leads me to charge our profession with negligence in telling its own story.)

Why do teachers teach? The basic motives, I think, are simply these: A teacher is a person who has decided that it is a sufficient and satisfying life's work to try to *understand*—in the full grandeur of that word—some of the traditions and skills and dilemmas of the human situation. He seeks to understand sufficiently to be able to transmit his knowledge into insight. And then, because the act of teaching is essentially a creative method of learning, the teacher searches with his students to discover means for them to accomplish their own learning and find their own insights. Thus, because the instructor is communicating, he is teaching—in the full nobility of *that* word.

The teacher does not make his commitment out of altruism or to secure anyone's gratitude.

He does it because, like the artist or the professional in any field, there is that within him that drives him to do so. He knows, without the evidence of tests and measures, that education occurs because of the unique personal qualities of the human beings doing the teaching and the learning. He is fully aware that these qualities cannot be recruited, bought, or even supplied by training; they can only be discovered, stimulated, and nourished by training. This is a humbling awareness, and it makes him continually conscious, when he "teaches," how complex, difficult, and even miraculous the whole phenomenon of learning really is.

Yet at the same time, the major private reward of teaching is rarely admitted out loud lest it seem almost arrogant (which it is not). It is a teacher's *duty* to cultivate in himself attitudes of mind and spirit which give him joy to possess. These attitudes, he discovers, often permit him the profound pleasure of real communication, not only with his students, but with like minded men, whether learned or unlearned. And, as though this were not enough, they give him, often, the excitement of intellectual discovery and so enable him, by no matter how little, to advance learning as well as to preserve it.

This, I think, is why teachers choose to teach. And we don't say it as often or as persuasively as we should. Dean McGeorge Bundy, of Harvard, at a graduate alumni meeting some years ago, said it well:

We need on our own part . . . an awareness of the degree to which the proud satisfactions of our profession are imperfectly understood by the very people whom we teach in college. This problem of communication about the quality and meaning of the academic life falls not upon a president or a dean but upon every member of the profession. Most of all . . . what we need . . . is an extension into every part of the world of education of the kind of self-respect and the kind of dedication, of the kind of awareness of the quality of what the trade is, which the best of our teachers . . . have shown us for so long.

I know that there are few topics more important than the basic salary scale . . . But there is no way of recruiting the very best of young people into this business if we try to persuade them that they are going to get rich. The problem is to communicate that this is at least one profession in contemporary life in which a man is under permanent obligation to make a connection between himself and something of the highest importance . . .

Teachers Anonymous



A value of a leave of absence is found in the opportunity it gives to take a somewhat detached look at one's job. A young professor of philosophy (A.B., Juniata College; B.D., Franklin and Marshall Seminary; M.A., Villanova), has become a charter member of

an unorganized club of "the least, the last, the lost."

By JOHN ELLSWORTH WINTER

AT the very beginning, I have a plenary confession to make, a confession which is an ardent avowal: I belong to the fellowship of those who've "had it," we're *kaput*. Let those who desire eminence and acclaim have it—it's all theirs, for what it's worth! We're going to be disturbingly content to live in the house by the side of the road and be a friend to man.

We have served on committee after committee, worked with organization after organization, given speech after speech to clubs, study groups, fraternities, sororities, associations, societies, and orders until (within a defined area) our names are on almost all the lists of "speakers readily available." But all such activities are so peripheral to higher education that there are times when higher education seems curiously distant to us.

This past year I have been relieved of all external obligations and burdens of our calling—except teaching! I am studying two days a week at a university to finish work on my doctor's degree. This adjustment by the college, through the insight and foresight of our president and board of trustees, has been made available to me with a scholarship. Thus I study for my degree *and* I teach to help others study for theirs. I don't have to go to committee meetings to "keep minutes and lose hours." I don't have student advisees with whom to straighten out schedules and credit hours. I don't have faculty meetings to attend in order to hear reports and statistics rather than to discuss the great ideas. I don't have pressures to be present for athletic events where the technician has sucked out most of the sport. I don't have pressures to attend social functions where so many, even colleagues, stand around and talk

about people (as do little minds) or about events (as do ordinary minds) rather than ideas. I just study. And teach. Pure teaching!

Teaching is procreating and exciting, nourishing and sustaining, directing and guiding the learning process of students into the kind of experiences which the teacher knows they need in particular areas of knowledge in order for them to develop their own native potentialities. Teaching is "truth through personality" piloting the young into the full venture for truth.

Such is my considerable task as it is every teacher's considerable task. But we are so busily attending conferences on how we can better do our task that we seldom get the task done. Our problem is quite similar to that which the Christian Church has in our society: the clergy is so busy doing church work that there is no time for them to do the work (mission) of the Church!

One of the first "organization men" must have been a teacher who had a brain full of knowledge and a heart full of understanding who forgot what his venturesome task was and substituted for it the myriad activities we now associate matrimonially with our profession which was once a calling.

Of course there is "pay" for such organization men. They get their pictures in the papers; they are interviewed by the press when controversial events arise. People from other schools know them; they are looked upon with something approaching favor when they walk downtown. They are more apt to be recommended for "higher" positions in which they will have more meetings to attend, more obligations to perform, more reports to give, more pressures to be what some one else thinks they should be. Compounded together these things make it less and less probable that such teachers will teach effectively, authentically.

The teacher as organization man becomes a VIP. He is regarded by school and society as important.

But is he so sincerely esteemed? What about the 600 students (or the thousands) who, figuratively, pay his salary, who look to him for information and wisdom but get only a peek? What about those students who thirst feverishly for understanding but get only the salty water of ritualistic, formal concern, while the professor

prepares a speech on "Understanding A College Student's Needs" to deliver to the Thursday Afternoon Tea Club which meets Wednesday evening to drink booze?

What about the young man who has lost spiritual and intellectual foundations and acutely wants help? He searches diligently in class with scrutinizing questions, possibly asking too many (which others would like to ask, but since they are not deeply involved in need they will not ask.) He would like more pointed care given to particular areas of thought to help him solve his problem; this means for the teacher more preparation for class presentation of the as-yet-uncovered area, or personal sharing with the tenacious youth, or, what is much more probable, both!

To the teacher's mind after the avid student has asked questions—almost inquisition style—the thought comes, "Why should I waste my time on this one student? His mercurial youthfulness makes him impatient; he can get his answers from his total collegiate experience, from all the disciplines, not just mine. Will anyone notice if I help him or overlook him? If they notice, will they care? Will they recommend me for another position, a 'higher' position because I am willing to spend extra time in more complete preparation and in sharing affectionately with one student? Or—will they remember the last committee gathering or social event I skipped or the meeting at which I was supposed to give a report?" Which will it be?

So—after sustained thinking and thorough searching, I have decided to join the goodly fellowship of those splendid people, unknown throughout all ages, from the initiating universities of the Middle Ages (other than Albertus Magnus, who *are* the known teachers at the very beginning of higher education in the West?) to the present mass movement in higher education in which the teachers are still unknown today. These are the *Teachers Anonymous*. They are underpaid for their teaching prowess and overworked with non-teaching details. So often they are unappreciated by administrators, public, and the VIPs.

Teachers Anonymous take seriously the call to engender, empower, and ennoble truth in their students. What was good enough for their teachers (for their teachers must have done exactly what I just wrote or Teachers Anonymous wouldn't be teaching now!) is good enough for them. To them have been given infinitely valuable

human lives to instruct and to cherish, yea, even to mold and to love.

Teachers Anonymous awaken each morning with the thoughts: "What truth can I share profitably today? Which students will need me most today—the nervy? the frustrated? the intelligent? the reticent? the misguided? the scholarly? the do-nothing?"

Teachers Anonymous are interested in the world around them, the nation, the community, but they never allow these interests to veer them from their task of communicating truth to their charges. If they have to choose between the Community Chest and preparation for the classroom, they will take the classroom every time. They will not get press notices, but they will notice student involvement in their diligent presentations. Guiding one young person or a class of young people along the adventurous pathways of truth can be much more important ultimately than helping raise a million dollar campaign fund on Main Street.

Teachers Anonymous try to meet their total academic obligations, which are important to their task. But administrators sometimes forget that the purpose of education is to teach, not to keep the masses informed public relation-wise about what's happening at the college. (By the bye, did you ever notice that no releases go out about classroom presentations of great ideas, but that the weight and grades of football players and the fraternity picnics, which are really beer-blasts, get newspaper billing?) Administrators get interested, and rightly so, in better colleges, but their only recourse is the individual teacher; the individual Teacher Anonymous is the prime source of help. To get help some administrators put on pressure: "You must attend meetings: you have to serve on committees; you must conduct surveys." They may even go further, purposely or unconsciously, by asking: "Do you want to get ahead in the profession? Then do more outside the classroom and the college."

Teachers Anonymous are interested in students qua students, in teaching qua teaching. They want to be teachers teaching, not teachers campaigning or teacher advertising, etc. ad infinitum, ad nauseum. At contract time they hope not only for a merit pay increase but for a *merit activities-decrease* so that they can give more and more time to their teaching and their students and less and less to the side shows of education.

Tragically it is true that a teacher's success

is judged not by his creative ability to serve his students but his adroit ability to impress authorities and the community. He may be a veritable Quintilian or Albertus Magnus or Agassiz, loved and respected by his students, but if he hasn't published articles or books, if he hasn't worked or officiated in the right organizations, if he hasn't spoken to the right groups he will never be recognized beyond his own classroom.

Teachers Anonymous balk at being solicited by pressure groups from the outside or the inside; that's why they are anonymous. They seek to serve their own; that's why they are anonymous.

They do their task; their consciences are clear—and that matters!

I am a charter member of that unorganized group known as "the least, the last, the lost." They are the *Teachers Anonymous*. It is an imperial badge of honor. I have another year of part time studying to finish the remaining few hours of my doctorate; so for another year I will be free from the many things that keep teaching from being teach-ing. The year after that I will still struggle to be one of those committed wholly to my task and my students. And the year after that, the same; and the year after; and . . .

How Would You Like It?

"How would you like being, let's say, a physician if your bag and your car were marked RATHER MEDIOCRE DOCTOR? Or a lawyer if your briefcase were stamped BARELY 60—SLOPPY—A SHYSTER? Or then again, considering also those on the other side of the fence, how would you like being a pharmacist if you had to post over your shop a sign reading in loud, red letters: TERRIFIC CHAP—A GENIUS? Or a housewife who had to walk about the house in an apron inscribed: WONDERFUL COOK—MAGNIFICENT BREEDER?"

"Under conditions similar to these, unbelievable as it seems, do our youngsters have to spend the first twenty-odd years of their lives."

DAGOBERT D. RUNES

Letters to my Teacher.

New York: Philosophical Library, Inc. 1961. Pages 14-15

The Duties of the Professor



The chairman of an English department (B.A., Grinnell; M.A., Iowa; Ph.D., Yale), asked by the A.A.U.P. chapters of his state to define the role of the college professor, gives us his answer.

By HOWARD O. BROGAN

THE FIRST duty of the professor is to learn. His second duty is to transmit learning to others. His third duty is to help bring about conditions conducive to effective learning. His fourth duty is to attempt to direct his own life intelligently according to what he has learned and to encourage others to behave in the same manner.

The research scholar has learning as his primary duty, but he has a secondary duty to share what he has learned with others by publication. The college teacher also has learning as his primary duty, for he cannot teach what he does not know, though for him learning may be more for the sake of teaching than an end in itself. Since knowledge is rapidly advancing in all fields, the college teacher must continue the learning process throughout his career as an indispensable accompaniment to effective teaching. Keeping up with the advance of knowledge is the single most important phase of his work. Because those he teaches are relative beginners, the professor tends to rest on his oars if he communicates only with them. He needs the additional stimulus of associating with his scholarly peers by attending scholarly meetings, and—whenever his talents warrant—by contributing to scholarly publication. Only the teacher who is himself in the full current of learning is well-qualified to interest students in the learning process.

Teaching is not primarily the transmission of knowledge but the stimulation of learning in the student. The student does not really know what he has learned until he has put what he has learned to use. Still more important is the student's learning how to teach himself. The teacher's objective is to so develop the student as to enable him to dispense with having a teacher, as

only at this point does the student become intellectually adult and fully competent to take his place as a citizen with power of decision in a free democratic society. Learning theory lays little stress upon lecture and text-book and much upon demonstration, discussion, and practice, including experimentation, research method, and logical thinking. The good teacher thus becomes one who may or may not be himself a skillful performer on the lecture platform, or before a television camera, or in the laboratory, but must be effective in making his students competent in assembling information and opinion, thinking through problems, and coming to reasonable conclusions. Since the student is not likely to become competent in such activities unless he learns to love truth for its own sake and to pursue truth with vigorous attention to appropriate techniques, the good teacher must be one able to motivate the student and to train him in the use of the techniques of learning. To achieve such results seems to require of the teacher an interest in working with the student as an individual and the patience to train him carefully in the discipline which the teacher professes.

That learning can best occur in a favorable atmosphere is obvious, and it is therefore the duty of the college professor to help develop such an atmosphere. Learning must be respected, especially on the campus, but also in the community, state, and nation. Intellectual and cultural activities must receive a clear priority in campus life, and they must be honored highly in the society which academic life serves. Of course the professor must first of all demonstrate the importance of these things to him by the part they play in his own life, but he also is required to allot some of his time to supporting such activities on campus, and in the rest of the social organism. This allotment of time will naturally vary from one professor to another but should be a regular part of his activity. The professor must not allow himself to be discouraged by the resistance which others put up to intellectual and cultural activities, still less succumb to general apathy, but must give uniform and consistent support to the best activities of the human mind.

Obviously no professor can simultaneously be the perfect scholar, teacher, and citizen, and most professors must feel their own personal inade-

quacies as they contemplate how much they have fallen short of being what they should be and doing what they should do. Yet this ideal professor is surely no mere construct of abstract theory. If anybody familiar with the profession will

combine the traits of the best professors he has known and find the common denominator, he may come closer than he expects to seeing that this ideal is actually realized in life, not in the individual but in the profession at its best.

The Wisdom of Love

"The wisdom of love must be learned from one end of this globe to the other if we are to raise generations that are to be better than we are, and our ancestors were. There are great textbooks: the Psalms of King David and the Proverbs of his son; the Blessings of Isaiah and Jeshu, of Ben Sirach and Moses; the Tao Te Ching of Laotse and the messages of the enlightened, of Gauthama Buddha, the Vedas and the Vedantas; the philosophy of Socrates and that of Spinoza. The songs are here, but where are the voices?"

"Unless we find the voices, and they become attuned to these great songs, we will keep on sending into the world new and newer generations with robot heads and robot hearts."

DAGOBERT D. RUNES

Letters to my Teacher.

New York: Philosophical Library, Inc. 1961. Pages 54-55.

Basic Approaches

We are privileged to present the following chapter from a new book "Creative Universities" by a philosophy professor (B.A., Ph.D., Southern California), a bold and creative thinker who has published many articles and books. The article is presented by permission of the publishers, College and University Press.

By **FREDERICK MAYER**

THERE ARE some observers who feel that American universities lost an important ideal when they were secularized. They believe that religious values are slighted in our major universities. A spokesman of this viewpoint is President Pusey of Harvard who maintains that the religious concern is one of the fundamental preoccupations of modern man, and he has done much to expand the effectiveness of Harvard's Divinity School.

To understand the religious impact on higher education, let us look at it in perspective. To start with medieval Europe, we can see how it developed real dedication among the teachers at the University of Paris. They had few facilities and few material comforts, and yet they exerted a vast influence on their culture. But they were hindered by dogmatism. Heretics were persecuted. The prevalent idea was that since truth was absolute, error could not be tolerated. They were so interested in the final end of life and in ultimate purposes that they neglected specific concepts. Since they regarded theology as the queen of the sciences, experimental science for them had only secondary significance. They believed in the rule of authority; hence, Aristotle was regarded as an infallible master in science, and his views could not be contradicted.

This method of inquiry, based upon deductive logic, prevailed not only in Paris but was also emphasized by Oxford and by many Italian and German universities. Scholasticism was still strong at Oxford in the time of Locke, who looked upon it as a method of regression. It proved to be a constant road-block in the development of the scientific method.

Jesuit education used the scholastic ideal, but it made provision for the frailties of human nature. Since Jesuit education was based on a careful study of psychology, the Jesuit teacher

was conscious of individual differences; he would instruct bright students in a different manner than slow learners. The ideal of careful planning was central in this form of education; nothing was to be left to chance. Since facts were easily forgotten, the importance of review was stressed. Assignments had to be mastered carefully, and complete reviews were given every month and every semester. Competition was encouraged by the Jesuits who often divided classes and schools into rival factions. Those who succeeded could become members of honor societies which had high standards of proficiency.

Jesuit education was based on the principle of authority. The student was to follow his teacher, while the instructor was to follow the dictates of the order. But often rebels emerged like Moliere, Descartes, Montesquieu, and Voltaire who instead championed free inquiry.

Protestant education reacted against the domination of the church, but it also favored authoritarianism. Thus the authorities at Marburg fought a constant warfare against freethinkers. When Wolff expressed his deistic ideals in Germany, his viewpoint was greeted with suspicion. When Kant stressed morality above formal religion, he was censored by the Prussian government. In the United States, a president at Harvard was attacked by newspapers in the 18th century because the students were allowed to read Gibbon's *Decline and Fall of the Roman Empire* which portrayed orthodox religion in a rather unfavorable light. Since most early college presidents were ministers, they were opposed to deism, a religious philosophy based on reason. When scientists in the last part of the 19th century championed evolutionary concepts and favored Darwinism they could expect condemnation, if not dismissal from their positions.

This is one side of the picture which should not be overstated. We should remember that religious college leaders, like Finney, were among the leaders of the abolition movement and often encouraged social and economic democracy. Today, Catholic colleges in the South are in the vanguard of the liberal forces trying to improve the relationship between the races. A university, like Boston, under Methodist auspices, has pioneered in providing enlightened leadership for several African countries and in overcoming the ten-

sions which prevent adequate human relations. Nor should we overlook the work of the Society of Friends which through colleges, like Earlham and Haverford, has exerted a most constructive influence on our civilization.

Thomas Kelly, one of the foremost teachers among the Quakers, in a notable book, *Testament of Devotion*, explained that without a deep faith modern man would live a fragmentary life and become a slave to materialism. The practice of God, to Kelly, was not a distant ideal, but a concrete reality. Rufus Jones, who taught philosophy for many years at Haverford, was a fearless prophet who applied his spiritual ideals to daily life. To him, the way of Jesus had a perennial vitality. Thus, he lived simply and he fought for the rights of minorities. When the Jews were being persecuted in Germany, he tried to intervene for them, and he showed immense courage in his talks with the Gestapo. To Jones, education was measured by its actual results. Did it bring man closer to God? Did it develop real humility? Did it create lasting bonds of humanitarianism?

Our students today have persistent interests in religious problems. While they are not concerned with denominationalism, they are asking searching questions about the nature of man, the problem of God, and the meaning of life. Eloquent religious emphasis week speakers, like Bishop Kennedy, are received enthusiastically. Courses dealing with philosophies of life are overcrowded. This does not imply that students are satisfied with easy answers, rather they are troubled and are concerned with the intellectual and spiritual paradoxes which we face in the 20th century,

¶ Just as basic as the religious influence has been the impact of humanism on American education. The humanistic ideal, a protest against the narrowness of the Middle Ages, stressed the powers and possibilities of man and upheld his dignity. It emphasized the claims of reason against revelation. In education, it showed how much students could profit from the study of Greek and Latin. Representative of the humanistic spirit was Petrarch who was not only a superb poet, as he displayed in his *Sonnets*, but also a prodigious scholar, who collected ancient manuscripts and who fought against the claims of scholasticism. Petrarch was certain that life was to be enjoyed, and that this could only be accomplished when reason was cultivated and doubt was tolerated.

Erasmus gave us a bleak picture of his early

education at the Sorbonne. He favored education based on interest rather than on discipline. He wrote textbooks and edited a Greek translation of the New Testament. He urged an expansion of the curriculum so that the classical languages would be cultivated and, furthermore, that history, geography and the sciences were to be stressed. Since scholarship to him was a way of life, he wanted to apply it to all areas of life.

In England, Roger Ascham taught Greek at Cambridge and later became tutor to Queen Elizabeth. He wrote, *The Schoolmaster*, which has become a classic, urged a compassionate system of discipline, instruction in the vernacular, and more dynamic methods in language training. To Ascham, the teacher was not an absolute authority but a friendly guide who would encourage the student.

The most explosive of the humanistic educators was Rabelais who believed in the rule of "Do What Thou Wilt." He opposed religion and all forms of scholasticism. In his ideal university there would be no walls, no clocks and no restrictions. Only beautiful girls with eager minds and personable boys were to be admitted. They would be so stimulated that they would all study hard and learn difficult foreign languages such as Hebrew, Latin and Greek.

In practice, the humanistic ideal proved to be inadequate both in Europe and in the United States. It led, as Thorndike shows, to a disregard for science. Many of the humanists looked with the same awe upon Cicero as the scholastics regarded Aristotle. Their language instruction tended to be pedantic. They admired Greek culture, but did not understand its basic spirit which was often Dionysian and unrestrained and based on a disregard of the past.

In the United States, the study of the classics in the 19th century was founded on grammatical exercises. Very seldom did the students have the opportunity to explore the ideas of the classical authors and relate them to their own lives. Reformers, like President Wayland at Brown, were regarded with suspicion especially when Brown tried to stress modern history and modern languages instead of the classics. The academic scholars were shocked, and for a while regarded the Brown degree as being practically worthless. Scientific studies were slighted at Columbia before 1850. A scientific course which was established in 1830 had to be given up thirteen years later because of lack of student interest. Prince-

ton was so proud of its theological and academic orthodoxy that one theologian rejoiced that not a single new idea had emerged out of Princeton in the fifty years of his professorship.

Today we have a broader conception of the humanities and liberal arts; now the physical sciences and the social studies as well as the behavioral sciences have become part of the liberal arts. In our time, we are not hindered by too much classicism. In fact, the study of Greek and Latin is, frequently slighted, and classical literature can attract students only when courses can be given with such titles as "Classics in Translation." Surveys show that in vocational interest students are far more interested in scientific careers than in the study of humanities.

Are we imbuing our students with a love of literature? Do they obtain an enthusiasm for classical culture? Are they appreciative of the place of art in society? Do they understand the implication of great ideas in their own existence? Are they concerned with scholarship as an autonomous ideal? Do they value the non-essentials which are basic in culture? Have they developed a genuine style in oral and written communication?

The answer to these questions cannot be positive. Part of the reason lies in the prevalence of vocational courses. The modern university often has no unifying ideal except that it wants to produce alumni and add to its buildings and endowment. Too often liberal arts professors look down on other departments, especially on education and business administration. This only shows arrogance, for no department has a monopoly on wisdom; and liberal arts can be cultivated as much in education as in English, as much in economics as in Greek or Latin.

We must not forget that the ideal of great humanistic educators, like Erasmus, was to create enlightened human beings who could use the past as a prelude to a more meaningful inquiry into the present and who would tolerate no barriers and frontiers in their world views. Thus the liberal arts and humanities depend on a basic philosophy. They are never ends in themselves, but manifestations of the creative urge which cannot be compartmentalized.

¶ The scientific ideal stamps its character on contemporary higher education. Scientists now are most in demand. Recently, at a major university twenty students received Ph.D.'s in physics. Nineteen of them received salaries starting at

\$10,000 from various industrial firms. One took up university teaching because he was an idealist; he started in a small college with half the salary that his colleagues received in industry. To make matters worse, at conferences, major firms will make lucrative offers to college scientists who often will accept. The result is that science instruction in higher education has not kept up with the advances of theoretical investigations.

The domination of science was predicted by Sir Francis Bacon in *The New Atlantis* and the *Novum Organum*. Bacon foretold of modern inventions like the airplane and the submarine. More important, he felt that nature is to be regarded with complete objectivity and that knowledge is a power which has to be used concretely. He wanted to investigate not only the physical sciences, but also social psychology. Since he was certain that there could be no infallible authority, he fought against the influence of Aristotle and he emphasized the importance of pre-Socratic thinkers.

To accelerate the advance of science, Bacon tried to demolish certain idols which tied man's mind to the past. Thus, he showed that the systems of philosophy were like stage plays which had no universal reality. The past should not be worshipped, according to Bacon, rather it should be re-examined. Our imagination was to be constantly checked, conclusions were to be verified; our terms were to have concrete meanings. Above all, we were not to project our wishes and feelings upon the universe, which to Bacon, was a vast mechanistic structure. He was certain that our knowledge was usually of symbols, rather than of the actual structure of the external world.

In *The New Atlantis* he anticipated the modern university. He felt that only intellectual co-operation could guarantee scientific progress. Thus, he recommended that scholars from various nations should combine their talents so that mankind could advance. He favored a higher social and economic status for the college professor who was far more important to him than the politician.

But as we read Bacon we find serious weaknesses in his system. He had little appreciation for literature; he had no comprehension of what Santayana calls the wisdom of the heart. He lacked warmth and a sense of compassion. In his ethical ideals, he was a Machiavellian who was guided by expediency.

¶ As a method of inquiry, science is admirable. It is objective and guided by the logic of facts.

Its cultivation can only aid the advancement of humanity. In higher education today Caltech and M.I.T. are probably the most satisfactory models. M.I.T., for example, in one year may spend 54 million dollars for applied research, while at the same time turning out pure scientists and emphasizing a strong humanities program.

We are often enraptured by a false sense of universality. Thus the religious reformers tried to impose their ideals upon all parts of the curriculum and the results were heresies. The humanists in a later period tried to remodel the curriculum to suit their world views and the result was the worship of grammar. Some scientists today feel that only their subjects matter; this again leads to cultural imbalance.

Man is a pluristic creature. He needs science for clarity and for quantitative expansion so that nature can be explored. But perhaps the most thrilling adventure is the journey towards inwardness in which qualitative and intuitive means have to be used. *Imagination is man's genius. It illumines his progress; it ennobles his ideals; it stirs his emotions. It gives significance to specific facts and it gives concreteness to universal experience. It is a citadel against the irreversible*

flow of time. It unites poetry and science, for science without poetry is sterile, while poetry without science ends in mysticism and vagueness.

In an age in which computing machines have taken over many human functions, we cannot ignore the problem of direction. Without a sense of centrality, our universities will develop a quantitative culture which will lack warmth and depth. Without a sense of direction, we shall succumb to the seductions of immediacy. Man is not merely a maker of tools but a questing being, eternally torn by doubts and constantly trying to remold the conditions of his existence.

Pestalozzi defined education as "a natural, symmetrical and harmonious development of all our capacities." This view can be applied to the goals of higher education. *It means that the heart as well as the intellect is to be cultivated, that intuition as well as analytical reason is to be prized, that the resources of the spirit as well as of the senses are to be treasured.* We must never forget that our sense of morale defines our effectiveness, and morale cannot be analyzed in purely quantitative terms. Science thus must be illuminated by moral insight so that our progress will not be a journey into oblivion and self-destruction.

Lethargy or Creativity

"The teacher, as a dramatist of ideas, must appeal not merely to reason but to emotion. He should never forget that students are impressionable and that they can be moved either in the direction of lethargy or in the direction of creativity."

FREDERICK MAYER
Creative Universities.
New Haven: College and University Press. 1961. Page 82.

Professors Can Improve Teaching



he was a Fellow in university administration at the Center for Study of Higher Education at the University of Michigan.

The following article assumes that a professor's job is his own and its improvement is in his own hands. The author (B.S., Utah State; M.S., Ph.D. Utah) has been a professor of educational administration until this spring when he became dean. A year ago

By F. ROBERT PAULSEN

THERE are at least two major reasons why college professors should concern themselves about improving instruction.

► Among the declared purposes of the university is that of transmitting the culture. Many scholars of higher education have stated this most succinctly and argued the case most appropriately. In his cogent way, Ortega y Gasset noted the principle and logic concerning the reasons why university administrators and faculty members need to reevaluate the purposes of higher learning. "Scarcity of the capacity to learn is the cardinal principle of education. It is necessary to provide for teaching precisely in proportion as the learner is unable to learn." Ortega called attention to the fact that education comes into being when the knowledge and insights needed for the "good life" are out of proportion to the capacity of man to learn. "Today more than ever before, the profusion of cultural and technical possessions is such that it threatens to bring catastrophe upon mankind, inasmuch as every generation is finding it more nearly impossible to assimilate it."¹

► The educational orientation most professors have had in the completion of the doctorate has been void of the study of pedagogical techniques. It has been founded on the conceptual framework of a single discipline and developed by the acquisition of minute facts of a specific area within the major subject. It has culminated in the completion of a research project or dissertation of little value in preparing for a teaching assignment. When it comes to such things as knowledge about psychological theories of learning or even a knowledge of the preparatory work for teaching, what training has been given to the neophyte? The selection of textbooks, planning of courses, determination of proper assignments, and methods of testing are seldom known by the beginning teacher at the university level. When it comes to different methods of teaching, how many professors really know the advantages and disadvantages of various instructional procedures? The lecture, recitation, demonstration, laboratory experience, project, problem-solving experience, seminar, and individual instruction all have their place in the framework designed for learning.

Is it really strange that many of those persons who are most vehemently opposed to learning about techniques of teaching are those who have never bothered to study teaching as a skilled

process? Among others, W. H. Cowley has said: "The technique of teaching involves manner, matter, and method; and the least of these seems not to be method."² And yet, "the vicious half truth that if you know your subject you can teach it" still dominates the thinking of many professors and is accepted as the whole truth.³

Our ignorance in this area is even more appalling when we consider the observation of the anthropologists, who in their study of primitive and modern man now suggest that we must go even beyond the knowledge already available on methods of teaching. "We need from the teacher . . . a totally new kind of teaching—a teaching of a readiness to use *unknown* ways to solve *unknown* problems. We are facing a world which this adult generation is unable to grasp, to manage, to plan for. The most we may reasonably hope for is that somehow the old unsuitable methods will get us through until another generation is able to tackle the job."⁴

Assuredly, the first step to improved instruction must be found in a re-affirmation of the purpose of the university to give instruction, and then in a re-dedication of the faculty to the profession of teaching. In the university community, the stronger alliance should be found between those who "profess" to know and those who want to learn. The teaching corps would be strengthened by a diminution of alliance between themselves and the practicing referent professional in the field. By right of interest and desire for improvement in practice, the professional in the field should have close contact with the research findings at the university. This does not mean that all faculty-members, and particularly those charged primarily with instruction, need sacrifice their professional teaching responsibility to constant and closer affinity with the practitioner. The current weakness is found in the failure of university leaders to recognize teaching as important as research. Both are of paramount significance in the maintenance of the university.

It may be assumed that professors, no less

¹ "A Century of College Teaching," *Improving College and University Teaching*, November 1953, p. 7.

² *Ibid.* See also: Benjamin A. Cornelius, "The Need of Training in the Teaching of Philosophy," *The Journal of Higher Education*, May 1951, p. 248.

³ Margaret Mead, *The School in American Culture*, Cambridge: Harvard University Press, 1951, p. 41.

⁴ Jose Ortega y Gasset, *Mission of the University*, London: Routledge & Kegan Paul Ltd., 1946, pp. 53-56.

than the public school teachers, oppose subjective merit ratings of their activities for purposes of salary increases and rank promotions. Historically, professors have always been rated, however, and it is the criteria and method of rating which should be of primary concern. The large universities have suggested that the criteria by which merit is achieved are at least three-fold. These are (1) research, (2) teaching excellence, and (3) community service. That the greater emphasis is placed on research and publication need not be debated. Only the naive university professor would assume that under present administrative practices his personal bibliography is not of more value to him in climbing the academic ladder than any attempt on his part to develop teaching excellence. And certainly, "community service" is only as important to the professor in achieving "merit" as the public relations value which transfers to his personal prestige. Is the "service" really considered important?

The problem of improving instruction or teaching effectiveness will have to be solved within the general problem of defining the role of the college professor. As long as "research" and "publications" take precedence to teaching, there will be little effort expended by many professors on the improvement of instruction.

Considering the possibility that some professors are actually concerned about teaching, and the fact that teaching is a primary purpose of the university, it is the thesis of this paper that beyond any formal educational preparation for the professorship, evaluation of the actual performance in each single course is essential to the improvement of instruction. And improvement in teaching, with an understanding quickened and deepened of its importance, will result subsequently in improvement of learning achieved by the students with whom the professor engages.

If it is agreed that teaching involves skills and techniques, operating as a distinct social process, there are evidences of areas which may be delineated and used as bases for self-evaluation. Precise objective measurement of teaching effectiveness is highly improbable. Who can determine the effect of the teacher's personality alone on the transformation of the student? The enthusiasm which emanates from the teacher, different from class to class and day to day, cannot be measured as to how much the student may be inspired to achieve final goals in his educational experience. That there might be ways to afford greater insight into teaching effective-

ness, however, has been noted for many years by those persons concerned with improving standards of instruction. There are ways by which professors can be real directing forces as they influence the lives of students.

As examples, areas of planning, communication, and attainment of immediate objectives may be considered in a preliminary analysis of one's own teaching proficiency. They may be considered as areas wherein the professor might develop cognizance of his own performance through self-evaluation.

PLANNING

Planning refers to the determination of ends and methods by which to attain them. Planning entails constant reviewing of needs and means to meet these needs. Most individual and group efforts are made more efficient by determining where, when, how, and by whom a task shall be performed. Planning has long been considered an essential characteristic of the successful executive and administrator. Respecting the teaching function, professors are actually administrators.

Strangely enough, planning as a basic requisite to other forms of administration is scarcely considered in any training program of the young Ph.D. directed toward a teaching assignment at a college. One might suspect that it is assumed to be the mark of an intelligent man. But even cursory visits to many classrooms afford evidence that planning has been neglected.

There could be better planning of course outlines and syllabi. In view of the professor's experience, there could be better planning of assignments required of students in achieving the objectives considered important by authorities in the field. There could be better planning of bibliographies and required reading lists, many of which are too lengthy and only formidable to anyone except the true scholar of the subject. There might be improved planning on the part of the professor reflecting upon what *he* hopes to achieve during each class period. There might be better planning, not only of the material the professor intends to cover, but also of the material the students can learn. Planning for attainment of student objectives is worthy, but planning for means wherein measurement might be made to determine what professors have taught is also important. Indeed, there might be some consideration of whether or not teachers have actually taught.

To argue the advantages of planning for

teaching seems ludicrous. And yet, this area might well come under the scrutiny of a careful, critical self-evaluation. An evaluative observation of one's own teaching might present objective data respecting evidence of planning for many kinds of learning activities incumbent on the professor and his station. Professors might well develop sound criteria of their own which would help evaluate evidence of *planning* as an indication of *good* teaching.

COMMUNICATION

Today the failure of communication may be considered a most important factor in any misunderstanding among men. Lack of effective communication may be responsible for the failure of co-ordination within the overall administration of an educational program. Failure of communication is the nub of the real problem in teaching effectiveness.

Authorities in the field of administration have observed that an individual will perform successfully, and even accept orders, when (1) he understands what is expected, (2) believes it to be consistent with objectives of the social system, (3) thinks it is compatible with his personal interests, and (4) finds that he is able mentally and physically to comply with it.⁵ The same thing is true with teaching. Learning can take place at the cognitive level only when communication is open and free.⁶

It has been noted that good communication—free communication—with or between people is always therapeutic and educational. Psychiatrists have developed this principle. Psychiatric techniques are designed to effect communication between the specialist and persons with severe emotional handicaps. Essentially, the psychiatrist and/or clinical psychologist re-educates the patient by using highly developed communication techniques. Even though teachers deal mostly with stable personalities in the classroom, they could benefit from a knowledge of the communication and teaching techniques employed by these trained counselors.

The entire teaching process is based on man's ability to communicate. And regardless of the teaching method used, the professor is the primary agent of communication.

⁵ Chester T. Barnard, *The Functions of the Executive*, Cambridge: Harvard University Press, 1938.

⁶ Although it is true that "learning" can be both cognitive and non-cognitive, it is assumed that the professor, in most university classes, is dealing with primary or secondary conceptual content.

Barriers to communication, inherent within any teaching method or experience are responsible for considerable failure in educational endeavor.⁷ The trained and experienced teacher knows that a single idea without a well-defined meaning may distort the intent of the message or desired conceptual development. For example: the anthropologist who begins his erudite lecture on the history of man by the statement: "When it comes to a consideration of the origin of man, let me say at the outset, everything the Bible says about the subject is false." The lecture may be brilliant from this point on, but for many students in the class communication ended with the opening remark. The statement elicits a barrier to effective communication and teaching, and the barrier becomes a fulcrum to separate opposing values.

This is not to say that the professor should not impart his knowledge or give his opinion. The problem is one of communication and involves the imperative to know how to profess and when to state personal opinion.

At best, communication proceeds in the face of uncertainties. It has the character of numerous indirective inferences particularly apparent in the case of speech.⁸ Uncertainties of speech sounds, accents and tones, uncertainties of the language itself, and uncertainties related to the specific past experiences of the listener all bear upon the necessity to improve communication ability in teaching.

Effective communication between professor and student will lead toward successful teaching. Professors will communicate more effectively when they seek to clarify ideas before delivery, examine the true purpose of each communication, become aware of the overtones as well as the basic content of the lecture, and convey information which may be seen to be of value to the student.

Surely, self-observational-evaluation might help in establishing effective communication toward improved instruction. Let the professor develop simple criteria to measure his communication effectiveness.

IMMEDIATE OBJECTIVES

The attainment of immediate educational goals is easier to ascertain than long-range objectives.

⁷ See: Carl R. Rogers, "Barriers and Gateways to Communication," *Harvard Business Review*, Vol. XXX, July-August, 1952, pp. 46-52.

⁸ Colin Cherry, *On Human Communication*. New York: John Wiley & Sons, 1957, p. 277.

The planning and preparation of lectures, lessons, units, or learning experiences are directed toward the expectation of goals. To the extent the professor is aware of the objectives he wishes students to achieve, the results of his teaching might be evaluated over shorter periods of time than the traditional quarter, semester, or year. Instead of the professor attempting to determine achievement objectives solely by the examination of students, equated to scores and grades, the emphasis in evaluation of teaching might shift occasionally to the determination of one's own teaching success respecting daily or unit goals. This emphasis would not detract from the importance of long-range behavioral or learning objectives of the student, but would rather increase the importance of adequate planning and execution on the part of those who teach. Indeed,

the major emphasis of this technique would be directed toward a constant awareness and consciousness of "good" teaching every day.

The literature is filled with both long and short descriptions of objectives of American education. Some teachers can even recite them. What is needed, however, are professors who know the educational objectives of which they take personal responsibility to help their students achieve during the period of a single class. Beyond knowing personal and immediate teaching objectives, the professor should know how his contribution, within the framework of his specific discipline, will help the student live that "good" and "liberal" life, being aesthetically aware, humanely concerned, and quickened in self-realization.

The individual faculty member is the most important link between what the university has to offer as an institution and what the student can become in consideration of his potential. In the educational experience, the professor presents the student with an image of what might be achieved. With serious contemplation this fact might be frightening.

Perhaps most professors reflect from time to time about the real influence they bear upon the ultimate success or failure of any single student. Unfortunately, for the most part the long-range influence registered in a single class will always be difficult to determine.

This writer has thought often of two students sitting on the front row of his American Government class over a decade ago. The class was large: perhaps the teaching was weak. One of these students has become a community leader, significantly successful in his chosen profession. The other student has met with some failure. It was embarrassing when he approached the professor on a downtown street some years later asking for a hand-out. Upon recognizing his benefactor, he said: "Golly, professor, I didn't know it was you. I'll bet you never thought one of your students would be a tramp on the street. But then, you have never known failure, have you?" His question might well have been addressed to all of his teachers as they consider their own successes and failures.

It is doubtful that most teachers ever really know their ultimate successes or failures with students. It can only be hoped that the "good life" will be achieved by all persons who traverse the "old mains" and "ivy halls."

CHECKLIST FOR OBSERVATIONAL-SELF-EVALUATION

I. Evidence of Planning for Lecture, Discussion, or Other Learning Experience

The professor:

- _____ 1. Related current lecture material to previous experiences of the student.
- _____ 2. Gauged orientation toward establishing contact in the introduction.
- _____ 3. Indicated need for current information.
- _____ 4. Clarified objectives at the beginning of the class.
- _____ 5. Stressed and summarized main points of lecture and/or discussion.
- _____ 6. Supported ideas with examples, comparisons, facts, etc.
- _____ 7. Showed imagination and originality in using educational aids.
- _____ 8. Adapted lecture, discussion, or experience to time limit of the class.
- _____ 9. Made assignments, indicating anticipation of learning results.
- _____ 10. Concluded with finality. (Established closure.)

II. Communicative Ability

The professor:

- _____ 11. Used appropriate vocabulary for level of the students.
- _____ 12. Appeared to perceive the experience background of the students.
- _____ 13. Used clear and concise sentences. Avoided verbosity.
- _____ 14. Used voice variation and "good" principles of speech.
- _____ 15. Was physically effective in lecturing or leading the discussion.
- _____ 16. Was effective in the use of transition.
- _____ 17. Used appropriate, or showed evidence of using visual aids for communication.
- _____ 18. Maintained status-role relationship between communicator and communicants.
- _____ 19. Attempted to make the message interesting.
- _____ 20. Afforded evidence of "supported judgments" rather than propaganda biases.

III. Attainment of Objectives

The professor:

- _____ 21. Motivated the class as evidenced by student participation.
- _____ 22. Covered the subject material or directed the activity as outlined in the plan.
- _____ 23. Indicated a practicing knowledge of allowing for individual differences.
- _____ 24. Utilized determinative techniques in measuring attainment of objectives.
- _____ 25. Clearly "feels" that educational objectives were achieved insofar as possible.

If ultimate objectives cannot be determined, there can be additional consideration given to the attainment of immediate ones. There can be a "feeling" of a job well-done. There can be a conscious acknowledgement of the teaching function based on the student and what he can learn rather than upon the professorship and the subject the expert knows so well.

If professors would accept more fully their role as teachers, if there might be more concern for improving instruction rather than a constant demand to reduce teaching-loads for other pur-

poses, the universities could reclaim a rightful position with which they were endowed by history. If professors might develop increased cognizance of the importance of "good" teaching, there would be little doubt that the wisdom of both past and present might be utilized more fully by each succeeding generation. Behavioral competence required in leadership would be improved. The understanding of man would be sharpened. Certainly, the prestige of the teaching profession would be increased through improved practice and recognized importance.

The Past as Prelude

"We must not forget that the ideal of great humanistic educators, like Erasmus, was to create enlightened human beings who would use the past as a prelude to a more meaningful inquiry into the present and who would tolerate no barriers and frontiers in their world views. Thus the liberal arts depend on a basic philosophy. They are never ends in themselves, but manifestations of the creative urge which cannot be compartmentalized."

FREDERICK MAYER
Creative Universities
New York: College and University Press. 1961.
Page 43.

Engineering Instructors Look at Their Report Cards



A project in which a student honor society and cooperating faculty have appraised the teaching in an engineering college is described by an English professor (A.B., Drew; A.M., Ed.D., Columbia). The faculty reported six uses of the rating and recommended its continuance.

By HERMAN A. ESTRIN

AT NEWARK COLLEGE of Engineering, the members of Tau Beta Pi, the engineering honor society, offer the faculty and instructing staff a voluntary teaching rating by the student body.

Tau Beta Pi's contact the instructors and ask them whether they want to be rated by their students. If so, the members of the fraternity describe the purposes and the philosophy of the rating system to the class; distribute, collect, and tally the rating forms; and return them to the instructors. These forms are coded so that no one in the fraternity knows which instructor was rated. These ratings are treated confidentially, for only the instructor receives the results of the evaluation.

The rating form is adapted by permission from that reported in Riley et al's *The Student Looks at His Teacher*. It lists the ten following qualities important to effective teaching: organization of subject matter, speaking ability, ability to explain, encouragement to thinking, attitude toward students, knowledge of the subject, attitude toward subject, fairness in examinations, tolerance to disagreement, and instructor as "human being."

The form contains two interesting questions which are most helpful to the instructor:

- 1 Of the ten categories listed above, which one would you say represents the greatest weakness of the instructor whom you have rated?
- 2 Which one of the ten listed categories would you say represents his strongest asset?

One instructor commented on the above questions in this way:

In my opinion, questions #11 and 12 are excellent. In addition to giving information on the weaknesses and strong points of the instructor, these questions confirm whether or not questions 1 through 10 have been observed objectively.

Interested in learning the reactions of the instructors who just received ratings and in improving the Rating Program, Tau Beta Pi prepared an instructor evaluation of the rating program, which was attached to the completed ratings. Instructors were requested to complete the form and return it to the Chairman of the Rating Committee.

To the question, "In your estimation, did your students rate you objectively?" ninety-eight percent agreed that they did so. As for the attitude and method of the Tau Beta Pi man who conducted the rating, ninety-eight percent of the instructors stated that the ratings were handled in a professional manner. Only eight percent of those who were rated stated that the results of the program did not confirm what they already knew about their instruction.

Instructors made only two negative comments about the program:

This is a waste of time, and the seriousness is questioned by many members of the department.

Students usually find it difficult to distinguish between what they want and what the profession demands of them in the way of education. This frequently prevents an objective point of view.

"Are you able to use the results of this rating sheet to your advantage?" To this question fifteen percent answered no because they said:

You can't teach old dogs new tricks.

I believe that I am already set in my ways of teaching.

However, eighty-three percent of those rated stated that they can use the results:

1) To improve the testing program.

For the first time my tests were criticized, and I feel that I can improve them.

Students stated I have poor testing technique and I shall try to improve it.

I shall re-evaluate my testing program.

2) *To eliminate the weak points of teaching.*

Some weak items were pointed out. I shall try to improve them.

The rating helps to strengthen weak areas.

Six or seven years ago because of illness, my speaking voice changed, and suddenly my voice was rated monotonous. The results of these ratings check my effort to avoid a monotone voice.

Since I asked for ratings in three subjects, I shall be able to improve myself by trying to overcome weaknesses.

3) *To determine the communication problems in the teaching process.*

This rating is perhaps the best available way to determine the communication obstacles in the teaching process.

4) *To offer specific ways in which the instructor may improve the quality of teaching.*

I should learn to organize my material better and plan it more professionally.

The results highlighted my weaknesses and gave me definite hints what to do about them.

My rating concerning the ability to explain was poor. I therefore will make every attempt to improve this fault by my being more specific in my explanations.

5) *To evaluate the instructor's professional developments.*

There is always room for improvement. Periodic evaluation helps in professional development.

The program rating enables me to improve on those facets in which the students said that an improvement can be made.

Any instructor should be able to use such an analysis to an advantage, directly or indirectly.

6) *To learn the students' confidential thoughts.*

It inflated my ego.

The ratings re-enforced my views and thoughts about my teaching and my students. They made keen observations about my instruction.

I found that the students' comments were sharp, candid, and incisive. Only on such a rating program can these thoughts be obtained.

When asked for constructive criticism about the program, instructors made the following suggestions:

1) *Conduct the ratings more often.*

This survey might be taken midway during the semester in order that the instructor may make the necessary adjustments to the students he is currently teaching.

Ratings could be of greater value if Tau Beta Pi conducted them periodically.

2) *Encourage students to make additional comments.*

I would request additional comments from those rating low on various areas.

Students' comments are frank, sincere, and helpful. Encourage students to write these comments.

3) *Extend this service to every instructor, especially to the new and young instructors.*

An excellent program, it should be carried out for every instructor in every course. It definitely is worthwhile.

The program should be extended to new and young instructors. Tau Beta Pi should be congratulated for doing an excellent job in a professional manner.

Since this rating will be especially helpful to the new instructors, a special effort should be made to rate all of the sections that are taught by the new instructor.

4) *Present an average teacher's rating based on the overall results of the program.*

Send each instructor one of the "Student Rating Forms" on which have been entered in each blank space the totals of all students' answers which were received. Without such a summary an instructor has no way to evaluate his own rating.

It would be helpful if a summary of all ratings could be obtained to furnish some measure of comparison.

5) *Make the following changes on the rating sheet.*

Mix the listing of categories from good to bad to avoid any halo effect.

Add questions regarding the possibility and existence of cheating by students in their quizzes and homework projects.

6) *Allow the students more time for rating.*

I suggest that you alert the students a few days ahead so that they could give the matter more thought.

7) *Continue this rating program.*

This program is most helpful. Continue it by all means!

It is a real service rendered by our selected students and should be continued.

This program is a real contribution of the students to the teaching profession. Keep it up!

A Reality to be Exemplified

"Democracy is not a distant goal, but a reality which has to be exemplified. Our colleges frequently give lip service to democratic ideals and then deny them by their actions."

FREDERICK MAYER
Creative Universities.

New York: College and University Press, 1961. Page 108.

Teaching Teachers



By ALEX BEDROSIAN
ANDREW L. PINCUS

IN THE STUDY leading to the establishment of the Newark College of Engineering Research Foundation, a faculty committee found a widespread need for in-service institutes in science and mathematics for high school teachers of these subjects. As a result, the Foundation, which was established in May 1959, offered one such institute each in physics, chemistry, and mathematics during the academic year 1959-1960. Their main objective was to bring teachers up to date on recent developments in their fields. Only secondarily were the courses to serve as "refresher" training.

The reasoning was that rapid advances in science during the last decade have left many high school teachers—especially older ones, trained many years ago—unprepared to meet adequately the educational needs of an age in which schoolboys speak glibly of nuclear processes.

Indeed, high school teachers and administrators themselves advised offering a tough, challenging approach to subject matter. The faculty committee polled a large number of teachers by questionnaire and interviewed key persons in the secondary schools of northern New Jersey, the geographical area of the College. The questionnaires and interviews showed the majority to be in favor of institutes stressing new areas of

From institutes for high school teachers conducted by a university values flow in both directions as shown in the following report of institutes in the fields of mathematics, physics, and chemistry. By improving high school instruction in these subjects the college helps staff to get better prepared engineering students. The authors are an English professor (B.A., Dartmouth; M.A., Rutgers) and an assistant dean of administration (B.S., M.S., Springfield College).

knowledge not yet treated in detail in the average high school textbook.

These findings were supplemented by two articulation conferences held at the College in the fall of 1959. High school teachers and department heads in physics and mathematics met with College officials to exchange ideas on the improvement of instruction in their fields. The high school representatives specifically suggested that the College could be most helpful by giving secondary school teachers an opportunity to restudy their subjects under leading scholars.

The first-year institutes, therefore, concentrated on new concepts and topics. The instruction was given at the College by three of its most highly respected professors.

► The institute in mathematics surveyed the program of study recommended by the Commission on Mathematics of the College Entrance Examination Board. The emphasis was on the application of these and other mathematical topics to problems of science, business and industry. The unifying ideas of sets, variables, functions and relations were stressed in the development of the apparently diverse topics.

► The chemistry institute dealt with a variety of theoretical concepts that have evolved or gained emphasis in the last 15 years. A major role was assigned to the solution of chemical problems. The course consisted of lectures, some demonstrations, problem computation periods and discussion periods.

► In the physics institute, the teachers studied both subject matter and the relationship of physics to modern philosophy and technology and other areas of science. Mathematical ideas and techniques were introduced as needed, and some computational and laboratory work was performed for clarification and illustration.

The institutes are one of three broad programs which the Foundation sponsors toward attainment of its basic objective: to help meet the nation's need for more and better-trained engineers.¹ The role of the institutes is to improve science and mathematics instruction in the high schools. Thus, from the Foundation's point of view, they may stimulate students to enter engineering education. The Foundation, a privately supported organization operating at and through the College, met the full \$5,300 cost of the institutes. No tuition or fees were charged the teachers, and required textbooks were supplied free.

In accordance with the wishes of the majority of the 115 teachers who answered the faculty committee's questionnaire, the institutes were held one night a week over a 30-week period. Each class lasted two and a half hours. The instruction was generally at the college sophomore

¹ The other Foundation programs are faculty research projects and fellowships for young engineering teachers. The fellowships combine teaching, research, and study for the master's degree.

level of sophistication. Partly because of this, all 72 applicants were admitted. Each institute was accredited by the State Department of Education for three hours' credit per semester.

EVALUATION

From the participants' point of view, the institutes achieved their objectives well. This judgment is based on evaluation questionnaires filled out by the teachers near the end of the course. Almost without exception, the questionnaires show, those who came to the institutes with a clear understanding of their objectives and with adequate preparation found them helpful for both professional background and classroom use.

The questionnaire asked specifically: "Do you think you can successfully communicate to your own students a substantial share of the information you have acquired in this institute?" The answers, by institute, were:

Mathematics—yes, 15; no, none.

Physics—yes, 15; no, none.

Chemistry—yes, 7; no, 4.

(The disparity of the chemistry replies is due to special circumstances, which will be discussed in the section on this institute.)

Comments volunteered by the respondents bear out this reaction. The burden of these comments was that it had been hard but rewarding

work to study under a college faculty member thoroughly versed in his field. A typical comment, offered by a teacher who earned an "A" in the mathematics institute, was: "I have found the course valuable because it has presented me with an opportunity to hear ideas of experienced [high school] teachers and a viewpoint of high school math as seen by a college teacher."

Another teacher who received an "A", in physics, wrote: "I was very pleased with both content and presentation. Many times it was gratifying to have a subject covered just as I was about to teach it myself."

Conversely, the participants who did poorly or dropped out altogether were, by and large, those with the poorest academic preparation for their institute. There is, in fact, a correlation between dropouts and inadequate backgrounds in subject matter (see the tables). The majority of those who did not finish lacked degrees in the field of their institute. Many, as the tables indicate, teach mathematics, chemistry or physics in addition to other subjects, including lower level courses such as general science or non-related subjects such as language.

At first glance, the dropout rate seems abnormally high. Twenty-nine of the original 72 entrants withdrew at some time during the year.

This is at least partly explained, however,

TABLE I
1959-60 IN-SERVICE INSTITUTE PARTICIPANTS BY TYPE OF SCHOOL
AND GEOGRAPHICAL LOCATION

New Jersey Secondary Schools by Counties							
BERGEN	ESSEX (Newark)	HUDSON	MIDDLESEX	MORRIS	PASSAIC	SOMERSET	UNION
<i>Mathematics</i>							
Public—6	Public—10 (1) Parochial—2 (2)	Public—1 Parochial—1	Public—1	Public—5	Public—1 Private—1	.....	Public—1
<i>Chemistry</i>							
Public—4	Public—6 (2) Parochial—1 (1)	Public—1 Parochial—1	.....	Public—1	Public—1	Private—1	Public—3 Private—1
<i>Physics</i>							
Public—2	Public—12 (1) Parochial—1 (0)	Public—1	.....	Public—2	Public—2	Public—1	Public—2
<i>Totals</i>							
Public —12	Public —28 (4)	Public —3	Public —1	Public —8	Public —4	Public —1	Public —6
Parochial—0	Parochial—4 (3)	Parochial—2	Parochial—0	Parochial—0	Parochial—0	Parochial—0	Parochial—0
Private —0	Private —0 (0)	Private —0	Private —0	Private —0	Private —1	Private —1	Private —1
12	32 (7)	5	1	8	5	2	7
				Public 63 (4)			
				Parochial 6 (3)			
				Private 3 (0)			
				Totals 72 (7)			

by three factors. First, the courses were free and nobody lost money by withdrawing. Second, any New Jersey secondary school teacher of science or mathematics with at least one year of teaching experience could enroll. The guidance counselor could—and did—enroll for mathematics study, and the biology teacher enrolled—in number—for chemistry. Finally, there was no compulsion, such as degree requirements, to finish; one sacrificed only a certain amount of edification by withdrawing.

In the physics and chemistry institutes, a specific area of inadequate preparation was conspicuous—mathematics. The questionnaire respondents commented repeatedly on the stress the instructors had laid on mathematics, especially calculus, in developing scientific ideas.

A "B" student in the chemistry institute wrote, "The course has been far too heavily weighted to math and calculation to help in secondary teaching though personally it has been a challenge." Yet the mathematical ideas intro-

duced in these institutes were essential to a full understanding of their scientific subject matter.

On the whole, the participants' reactions agree with the instructors' observations of their classes, as expressed at a staff conference on the institutes at their conclusion. The physics and chemistry instructors had particularly observed the teachers' difficulty with mathematics.

THE MATHEMATICS INSTITUTE

The mathematics institute proved especially gratifying to the teachers who wanted to prepare for the CEEB course. Most of the others were also pleased, though to lesser degrees, depending on their expectations and needs.

About half the respondents expressed a desire for more study in statistics and probability, especially in an institute devoted to them. Yet many also said they would have difficulty in presenting the 1959-1960 institute's instruction in these areas to high school students. A number of other participants asked for a calculus institute. Their feeling was that they had studied calculus so long ago that they needed a "brushup."

THE PHYSICS INSTITUTE

The teachers in the physics institute also expressed

TABLE II
MATH INSTITUTE

No.	Sex	Cred.	Bach.	Major	Minor	Other Degree	(Subjects Taught)		Gr Ea
							Yrs. exp.	Math Only	
1	M	NA	B.S.	Math	Soc Stud		1	X	W
*2	M	54	B.S.	Educ		M.Ed.Math	7	X	A
3	M	NA	B.A.	Math	Philos	B.D.(Theol)	3	X	W
4	M	NA	B.S.	Math	Physics		1	X	W
5	F	NA	A.B.	Math	Economics	M.A.Math	29	X	A
6	M	17	B.S.	Elem Ed	Soc Stud		5		A
7	M	30	B.S.	Math	English		1	X	A
8	F	20	A.B.	Science	Soc Stud		8	X	A
9	M	NA	B.S.	Chem	Math		2		W
*10	M	NA	B.S.	EE		M.A.Math-Sci	36	X	W
11	M	NA	A.B.	Soc Stud	Math		13		W
12	M	79	B.A.	Math	Philos		3	X	A
*13	M	70	Ph.B.	Math	Phys Sci	M.A.Math	11	X	A
*14	M	18	B.A.	Biology	Educ	M.A.Phys Sci	5		B
15	M	55	B.S.	Math	Soc Stud	M.S.Educ	10	X	A
*16	M	NA	B.A.	Math	Sci	M.A.Math-Educ	35	X	W
*17	F	70	B.A.	Math	Latin-Ger	M.A.Math	20		B
18	M	NA	B.P.E.	Phys Ed	Psych	Ed.M.Admin	28		W
19	F	NA	A.B.	Chem	Physics	M.A.Educ	8	X	W
20	M	60	B.A.	Math	English	M.A.Math	5	X	A
21	F	41	B.A.	Math	English		2	X	A
22	F	20	B.S.	Chem	Educ	M.A.History	47		W
23	F	NA	B.S.	Math	Sci	B.A.Sci-Math	2	X	W
24	M	70	A.B.	Math	Educ	Ed.M.Educ	12	X	A
25	M	NA	B.S.	Biochem			5		W
26	M	NA	B.A.	Biol	Chem		4		W
27	F	NA	A.B.	Math	Latin	M.A.Latin-Educ	30		W
28	M	42	B.A.	Math	Phys Ed	M.A.Educ	7	X	B
29	M	NA	B.S.	Eng-Math			0	X	W

(first year of teaching)

* Dept. Head

general gratification. The only negative comments concerned the mathematical content of the institute.

The prevalent attitude was expressed by an "A" participant who wrote: "I feel that this institute is fulfilling a very important need in science education. We are not bogged down in an overemphasis on modern physics or fancy techniques, but are being exposed to the fundamental physical principles that form the foundation of a high school course using mathematics that could be applied by our students."

Subjects most frequently suggested for future physics institutes were atomic and nuclear physics, electricity and electronics, mechanics, and optics.

THE CHEMISTRY INSTITUTE

The chemistry institute met with a mixed reaction. The majority of the teachers who finished expressed gratification. A sizeable minority, however, was disappointed.

The two chief sources of disappointment are illuminating. One was the lack of consideration of biological topics or biochemistry in the institute. The other was its concentration on theory, with few demonstrations and no laboratory work.

Why should such complaints have arisen when the publicity for the program said nothing about biology or laboratory work?

Table II provides a key. Of the 20 teachers who enrolled in this institute, only four taught chemistry exclusively. Eleven of the rest taught chemistry and another science (usually biology) and/or mathematics. Five taught no chemistry at all.

Apparently the average high school chemistry teacher today does double duty, even more than the mathematics or physics teacher (see Tables I and III). Moreover, many chemistry teachers apparently get into the field

through study of other scientific fields. As Table II shows, a minority of only eight of the participants in this institute had majored in chemistry as an undergraduate or taken a graduate degree in it. Most of the rest had entered chemistry teaching via biology or generalized science majors.

Since nine of the 20 participants taught biology, it becomes understandable that some were disappointed in the non-biological approach and content of the institute. Since, furthermore, much of the high school chemistry course consists of demonstrations and laboratory work, it becomes understandable that others missed these features in the institute.

In short, some of the participants apparently expected the instruction at the College to mirror the instruction they gave in their own classrooms—and laboratories. This would account for the four teachers who said the institute would be of little or no value in their own teaching.

The point of view of this group was expressed in a "B" teacher's comment: "Lack of laboratory work, demonstrations or chance to see more advanced equipment made the course dull. I am not interested in another similar course even in some more advanced area."

On the other hand, it should be stressed that this group was a minority. The majority view was expressed by another "B" participant: "I realize now that my chemistry background is far weaker than I had suspected. However, I do feel that I benefited from those long trips to N.C.E. every Monday night."

Areas of chemistry most in demand for future institutes were biochemistry and organic chemistry.

CONCLUSIONS

Perhaps the main conclusion to be drawn

TABLE III
CHEMISTRY INSTITUTE

No.	Sex	Cred.	Bach.	Major	Minor	Other Degree	Yrs. Chem exp.	Only	(Subjects Taught)		Gr Ea
									Chem and Sci/Math	Chem and Other	
1	F	NA	B.S.	Biology	Gen Sci	M.A.Psych	6		(Biology only)		W
2	M	NA	None	Chem	Educ		8	X			W
*3	M	20	A.B.	Biology	Chem	M.A.Sci Educ	10		(Biology only)		B
4	F	NA	A.B.	Chem	Phys-Math		24	X			W
5	M	NA	Ph.G.	Pharmacy	Chem	B.S.Bus Admin M.Ed.Personnel Guidance	1		Phys sci, Algebra Biology		D
6	F	43	B.A.	Science		M.A. Science	15		Physics		B
7	M	NA	B.S.	Science	German		4		Phys-Gen Sci	German	W
8	F	NA	B.S.	Chem	Music		20		Physics		W
*9	M	64	B.S.	Chem	Biology	M.S.Chem M.A.Sci Educ	25		Gen Sci,Biol, Phys,Math		B
10	M	NA	B.S.	Forestry		M.A.Educ	4		(Physical Sci & Earth Sci)		A
*11	M	36	A.B.	Science		A.M.Chem Ed.D.Sci Educ	13		(Earth Sci & Biology)		A
12	M	29	A.B.	Science	History	Ed.M.Educ	26	X			C
13	M	32	B.A.	Phys Sci	Biol Sci	M.A.Phys Sci	4	X			B
*14	F	NA	B.S.	Biology	Chem		3		Biology		W
15	F	30	B.S.	Chem	Biology		1		Biology		C
*16	M	35	B.S.	Chem	Biology	M.A.Sci Educ	25		Physics		B
17	M	NA	B.S.	Biology	Chem		1		Biology		W
18	M	NA	B.S.	Biology	Sci		5		Biology & Gen Sci		W
*19	F	NA	A.B.	Chem	Math	M.A.Geology- Chem	23		Math		D
20	M	22	B.S.	Phys Sci	Soc Stud		1		Physics-Gen Sci		A

* Dept. Head

from the first year's experience is that the institutes meet a definite need. Those teachers who enroll with adequate grounding in the fundamentals of their subject return to their home classroom better able to transmit up-to-date scientific and mathematical knowledge to tomorrow's college students. This achievement is significant in view of some educators' criticisms of free institutes.

In their answers to the evaluation questionnaire, the teachers themselves expressed strong interest in attending future institutes at the College. Thirty-seven said they would like to do so. Of the six who were not interested, several cited personal reasons, such as nearing retirement.

Analysis of the enrollments shows that the institutes reached a representative group of teachers. The 72 participants came from eight counties and included seven teachers from Newark proper and 25 others from Newark's home county. There were 63 public school teachers, six from parochial schools and three from other private schools. There was also a broad distribution among the young and the old.

On the basis of its first year's experience, the Foundation is expanding its institute program in 1960-1961. The original three institutes are being repeated, and to them are being added an "advanced" institute in each of the three subjects.

The advanced mathematics institute is taking up applied mathematics in the fall term and

modern algebra in the spring term. In the advanced chemistry institute, which is devoted to analytical chemistry, quantitative analysis is being studied in the fall and instrumental analysis in the spring. The advanced physics institute is a presentation of the modern course devised at Massachusetts Institute of Technology by the Physical Science Study Committee.

Because the PSSC course is gaining wide acceptance in New Jersey secondary schools, there has been particularly heavy demand for enrollment in this institute. Nearly three times the number of participants accepted, 22, applied. Those who were qualified to enter, but for whom there was no room, were given an opportunity to take the other physics institute while waiting for an opening another year in the PSSC course. A number of them entered the other institute.

The Foundation and the College are satisfied that in-service institutes are an inexpensive way in which the institution of higher learning can make a substantial contribution to the improvement of secondary education. The need for the institutes exists, and the teachers are eager to enroll for really stimulating study. And while strengthening high school instruction, the college actually establishes closer relations with the high schools in its area. For the public college, which draws much of its student body from the local secondary schools, the opportunity for closer ties is particularly beneficial.

TABLE IV
PHYSICS INSTITUTE

No.	Sex	Cred.	Bach.	Major	Minor	Other Degree	Yrs. exp.	Phys Only	(Subjects Taught)		Gr Ea
									Physics and Sci/Math	Physics and Other	
1	F	15	B.A.	Science		M.A.Science	5	X			A
2	M	16	A.B.	Phys Sci	Biol Sci	M.A.Educ	8		Chem		B
3	M	30	B.S.	Science	Math	M.A.Nat Sci	14		Gen Sci		A
4	M	48	B.S.	Math-Phys	Educ	M.A.Science	13		Gen Sci		A
5	M	NA	B.S.	Biol	Chem		4		Biol, Gen Sci		W
6	M	18	B.S.	Math		M.S.Math	26		Phys Sci		B
7	M	NA	B.S.	Chem	Biol	M.A.Educ	22		Math		W
8	M	30	B.S.	ME			12	X	Chem		A
9	M	24	A.B.	Phys Sci	Biol Sci		1		Chem		A
10	M	NA	B.S.	Bus. Admin.			2		(Gen Sci Only)		W
11	M	20	B.A.	Science		M.A.Science	21	X			A
12	M	30	A.B.	Science			2	X			A
13	M	8	B.S.	Sci Educ	Soc Stud		0	X			B
(First Year of Teaching)											
14	M	16	A.B.	Science		A.M.Science	4		Chem, Applied Sci		B
15	M	NA	B.S.	Sci Educ	Math		2		Math		W
16	M	NA	B.A.	Biol	Educ		2		Biol, Gen Sci		B
17	M	18	B.A.	Science		M.Ed.Educ	8		(Chem Only)		B
18	M	NA	B.S.	Science	History	M.A.Educ	28		Sci, Math		W
19	F	14	B.A.	Science			12		Chem, Gen Sci		B
20	M	24	B.A.	Science			1	X			A
21	M	24	B.S.	Science	Math	Ed.M.Educ	8		Chem		B
22	M	NA	A.B.	Science		A.M.Educ	7		Gen Sci		B
23	M	NA	B.S.	Biology	Philos	M.A.Sci Educ	12	X			W

Evaluating College Teaching



That the ambitious professor wants and needs continuing evidence of his teaching effectiveness is emphasized by an evening college dean (B.S., S.T.M., Boston; S.T.B., Harvard; Hon. Ed.D., Rhode Island College of Education) who is a frequent contributor.

By RICHARD K. MORTON

COLLEGES and universities have many different forms of evaluating their classroom teaching. Some of these are irritants to faculty members, especially if there is any insecurity or self-doubt involved. Others see these methods as subject to possible use in a campaign of administrative espionage.

Almost everyone agrees, however, that some form or forms of evaluation are both good and necessary.

1 Student evaluation is a part of many programs of teaching evaluation. The students fill out, each semester or each year, a carefully prepared form, doing so anonymously, and these ultimately reach the instructor after perusal by an administrative officer and also *after* grades for that term have been handed in! No one needs to elaborate on the limitations and possible abuses of these forms. The form itself may be incomplete or improperly phrased, handed out at the wrong time or in the wrong way. It may be subject to misinterpretation; students may not take it seriously. Some students may be very susceptible to bias, prejudice, and love of causing trouble for someone. In other cases the student may lack judgment and may blame the instructor for defects residing in the textbook, the hour the class is given, the conditions in the classroom, and so on. He may also project his own indifference to that course to such an extent that he feels it originates with the instructor.

These limitations and faults exist, and yet these forms can be quite revealing and helpful in some ways. The instructor gets some idea of what ideas and impressions students have, and the fact that they may be biased or erroneous does not make them valueless for some purposes. He knows what he is contending against, and can often change his techniques and correct these impressions.

I feel that student evaluation need not be limited to these questionnaire forms, but could perhaps take the form of carefully planned and supervised meetings by responsible student groups made up of instructor's students who discuss verbally the

good and the bad of his classroom procedures and take time to write out a constructive critique. There can be many other improvisations on this method to enlarge its scope and make it more accurate.

2 Evaluation frequently comes from some administrative source: department or division head or a dean. This method, as is well known, has its strong and weak points. It is not possible to visit a classroom without affecting the normal balance and setting. The supervisor's very presence injects a foreign element which often brings tension and an abnormal condition. However this may be, what goes on in a classroom one day may not be typical of other days; we all have our "bad days." The particular occasion may be one on which a very dull or difficult bit of material is being handled. This method, however, can be effectively used when there is a continuing rapport between the department and division heads and when this kind of visiting one another's classes becomes common and expected. No administrator should swoop or snoop. He should not set traps; he should not deliberately try to make a situation difficult for an instructor. He should not formalize the occasion so that it becomes stiff and austere. It should involve friendliness and interest as well as a critical and inspectional purpose. If possible, the visitor should try to make two or three informal and unofficial visits as well as the official one and not label which is which.

As a prelude to this administrative visitation, such officials should be briefed in advance on the general content, purposes, and procedures of the course and should familiarize themselves at least to some degree with the textbook material being taught. To step into a classroom situation in a subject with which one is none too familiar may be to misjudge or misunderstand rather badly.

In many cases it is helpful to have the instructor choose the official whom he would like to have as the inspecting supervisor.

One way in which visitation can be made more fruitful lies in having instructors make available to designated officials a syllabus or prospectus of the course material or an outline showing intended procedures.

Preparation for some form of evaluation or inspection can be improved when each teacher is an active member of campus groups in which discussions are held and papers read. In this way the young instructors get a chance to try their wings and to show what they can do and also get a chance to have some informal opinions of how they deal with a subject before a critical group. This is another byproduct of belonging to and reading papers at local, regional, and national groups and also of giving speeches and reports at various types of educational and community meeting. It is not uncommon for some young instructors to have

only classroom experience and technique. In my own work as director of regular radio and television programs, in which I sought the services of administration, faculty, and staff, I was often amazed to find how many in these groups had seldom spoken on the radio and never had been on television. Large groups also had seldom given an address of any length to any public organization of any importance.

I think it is excellent for informal groups of faculty, staff, and their wives to meet occasionally and to hear one another perform in one role or another. What is needed is polish and constant revision of material and techniques to develop a smoothness, comprehensiveness, and adaptability so that one will be more likely to approach a class, at any time, with more assurance and power. Often one is not an effective teacher because he is not effective in general communication or in any role which brings him before a group of people. Programs of self-criticism, I think, can also be very helpful, perhaps as a preliminary to criticism by others. Let the instructor write out a detailed critique of one of his own classroom performances. If he can review it by a recording tape, that may be good, too.

- 3 With our sense of professional dignity and importance, it may be quite unpopular with us to consider that we should do some work on our classroom technique. But in the drama try-outs, radio and television rehearsals, and demonstrations of ability in other fields, I think we can see that it would be useful for prospective instructors to have auditions and try-outs for teaching positions. These could come after the instructors have attended workshops and seminars on teaching problems. Many administrative officials are very careful to scrutinize a prospective faculty member's academic transcripts, records, and the like, as well as his references. But his teaching skill is left to be tested by other and much less concrete evidence.

We have had long battles over this unnecessary and quite misguided matter of the so-called "educationalist" emphasis—the emphasis on substance vs. emphasis on methods. But it is not and cannot be an either-or situation; it is a both-and. Every instructor needs a basic and competent mastery of his subject; but he also needs effective teaching methods. We have developed an unfortunate tradition of allowing alleged eminence in one's field to excuse the scholar for all sorts of teaching deficiencies and irresponsibilities. The day for this has gone.

The new instructor needs practice teaching and internships as much as the teacher in grade schools. He needs a competent knowledge of teaching situations and problems. He needs to have a modern knowledge of psychological testing and means of adjudging what his students are learning.

In many universities we have testing and counseling service for various types of student need. But we have even greater counseling and testing needs for faculty.

No one is above the need for being evaluated in his teaching. He may have habits, born of rich and profound scholarship, of remaining in the depths of his researches and not coming up to the surface enough when he meets his freshmen. He may have annoying personal habits—roaming around the room; overindulging his sense of humor or penchant for digressive remarks. He may have so many collateral notes and references that he simply inundates his students with unsorted material which they are unable to classify or cope with. His very specialized erudition may render him unable to keep in mind his primary teaching objectives.

It would appear to me, too, that instructors desirous of being effective in the classroom would profit by some informal sessions with the members of the speech department and by hearing those who are effective in communications in other fields—salesmen, personnel directors, clergymen, and so on. Advertising writers and editors can also be of help in giving hints on the organization of material and in the effective emphasis of certain points most valued.

Much excellent scholarship in our colleges, I am convinced, is being hidden and displayed at poor advantage through poor teaching techniques. Evaluation, to my mind, must not be an occasional matter, accomplished by one or two established means, but a continuing process, using many means. The ambitious teacher wants evidence from students, colleagues, administrators, people in the community, and from various specialists.

He needs all the evidence he can get as to how he is reaching or failing to reach his students and his public. He wants to learn more and more about outlining his material for lectures and the best ways of cataloguing reference material and notes. He wants also the hints he can get as to what will attract students' attention and what personality traits are often of the greatest value to the teacher. He wants to root out the type of habit that annoys or distracts. He wants to know the best ways to deal with a test along with one's own supplementary material. He needs to study the outlines and the investigations of others. It is good if every semester departments meet and exchange newly discovered little plans or projects or teaching gimmicks that have been demonstrated as effective.

A department head might well experiment with his associates and have them all take a given textbook and work out a teaching plan or show what they would do to transform the material in a given chapter into something which the students would be able to grasp. The goal is to develop in the instructor a determination to maintain a constant and rigorous and effective program of self-evaluation.

In-Service Improvement of College Teachers



Growth in teaching competency is a lifelong responsibility of the college and university teacher, according to a graduate dean and research executive (B.S., Washington; M.S., Idaho; Ph.D., McGill) who presented the following address before the Pacific Northwest conference on Higher Education, reprinted here by permission of the Conference.

By JOSEPH L. MCCARTHY

FOR MANY CENTURIES, colleges and universities prepared men in theology, and for the law, and for medicine, and of course for college and university teaching to perpetuate their kind. However, in recent years and especially in the United States, colleges and universities have functioned, not only to prepare men for these classical professions but, in addition, for service as practitioners in a host of other vocations—e.g., architects, business administrators, chemists, and so on through the alphabet to youth counselors and zoologists. Ever since the end of the Battle of the Elective Curriculum at Harvard College about 1850, the difficulties of striking the right balance between the general and vocational content of college programs have been with us.

In our American college system, we recognize and accept the fact that our students are widely diverse in their inclinations and their intrinsic abilities, and a variety of programs and institutions are being developed to provide the individual student with the opportunity fully to develop the talents which he has.

Wide and diversified as his field now is, the college teacher today continues the activities and traditions initiated by his predecessors when the concept of "community of scholars" was invented some seven hundred years ago at Bologna and Padua, at Paris, and at Oxford and Cambridge. The college teacher today is still concerned essentially with three tasks: to preserve knowledge, to transmit knowledge, and to create knowledge.

To be a good teacher, of course, the really essential requirement is that the teacher must

know his subject thoroughly, and must believe in the interest and value of his subject. The second requirement is that he must know and like his pupils, and develop some understanding of them, realizing their infinite complexity. The third requirement is that the teacher know about and is interested in a wide variety of matters outside his field. The final requirement, of course, is the basic and bursting desire to teach—to perpetuate himself.

To prepare for college teaching, the interested and able student, of course, conventionally proceeds through an undergraduate collegiate program and it is especially desirable that his undergraduate work be in a general liberal arts program designed to lay a firm and broad base for life-long development of interest and understanding of many matters. A broad undergraduate program is also desirable because it gives the student an opportunity to identify one or a small number of fields which prove to be of special interest to him for detailed study in the course of his graduate study and teaching career, e.g., history, business, physics, etc.

The prospective teacher conventionally carries on graduate study for one or more years to the master's degree or the doctorate degree. These years of graduate study are directed toward mastery of a certain subject matter field. In a good graduate program, a wide variety of experiences is provided to the prospective teacher toward three main objectives: (a) to develop his understanding of the quality of evidence and objectivity and thereby TO PRESERVE KNOWLEDGE, (b) to develop his ability to teach and write and thereby TO TRANSMIT KNOWLEDGE, and (c) to develop his ability to do research and thereby TO CREATE KNOWLEDGE.

A great deal has been said and written about the need for the master's or the doctor's degree as evidence of qualification for college teaching. In the first place, it is a fact that the time and extent of preparation conventionally thought to be needed for teaching is different in the several fields: for example, in the course of appointment of Mark Toby as Walker Ames Professor of Art at the University of Washington, we recently discovered he has no degrees at all—yet he is surely one of the world's great artists—and a very great teacher. Moreover, the significance of the mas-

ter's degree is to some extent uneven throughout the United States and this is leading to rather widespread activity directed toward the development of effective ways to accredit graduate schools and the master and doctor degrees. Basically, however, the statement of the degree is not decisive. Thus, in England at Oxford and Cambridge universities there are today many professors and heads of departments who have earned only the baccalaureate degree, and have been granted the Master of Arts degree on the conventional complimentary basis, but do not hold the doctorate degree.

But what these men do have, and what is essential for the good college teacher to have, is a certain quality of mind. What is essential for the college teacher to have is a mind which is equipped with good body of fact and understanding in a field of knowledge, a mind which is open to consideration and critical analysis of new ideas, a mind which is anxious and willing to work to acquire new facts and understanding, and finally a mind which is bursting to transmit facts, understandings, and ideas to students.

Young men and women qualified in this manner for college teaching are likewise prepared very well for careers in business, in industry, and in government, where the ability to make objective analyses, and to teach, or sell associates or other personnel is often of great importance. In recent years many potential college teachers have accepted desirable positions in other fields and thus substantially increased the demand for qualified candidates from the graduate schools.

To attract to college teaching persons well prepared for this profession probably requires the usual incentives of salary and working conditions and prospects for advancement. However, I am sure that we all of us have not emphasized the really unique rewards of teaching which have been stated as three: (1) the opportunity for independent study with some leisure time for contemplation, (2) the opportunity for use of the mind on selected subjects of value, and (3) the happiness of making something out of a student or a subject. These attractions to college teaching are real and unique. Let us teach these effectively as part of our program of improving college teaching.

To teach the truth as far as it can be identified, the college teacher must then have experience and background in evaluation of evidence, and his thesis experience gives him a first trial in this

field. The outcome of his study and collection and evaluation of evidence is the thesis which according to one dictionary definition is: "A proposition to be maintained or defended in argument, formerly a proposition publicly disputed by a candidate for a degree in a medieval University. . . ."

Finally, his thesis findings must be communicated—that is, his new proposition, together with the evidence that he has assembled and his evaluation of the evidence. The careful formal writing of a thesis and perhaps also the careful oral defense of his thesis are other valuable preparation for college teaching. The thesis or dissertation gives the graduate student an introductory experience in the selection of an important topic, the collection of evidence, the evaluation of evidence, the setting forth of significant conclusions or propositions, and finally the communication of the propositions and evidence in writing and orally for critical consideration by the world in general and his scholarly colleagues in particular. Surely these experiences relative to subject matter are essential conditions precedent to college teaching.

In a graduate student's program there is, or should be, substantial training in the methodology or techniques of teaching as well as training in subject matter. This is particularly so for those graduate students who serve as teaching assistants. In this capacity they generally assist in the teaching activities of the professor in charge of a course and, in effect, are apprentices to the professor in carrying out under his supervision activities related to teaching. Thus, a teaching assistant ordinarily assists his professor who functions as his tutor and leaves to the teaching assistant some of the arts of teaching including, for example, the following: (1) planning the program for a particular class or for a series of class meetings, (2) preparation specifically of outlines and materials for lectures or seminars or class discussions, (3) delivery of lectures once in a while as a substitute for the professor, (4) conduct of discussions to fix material in the student's mind and/or recapitulate subject matter covered, (5) evaluate student performance which includes experience in the problems of drawing conclusions from questions and discussions and conversations with the students as well as the more formal activities of examinations and the conduct of effective interpretation of examinations which may be given, (6) the absorption into the teaching assistant of the tangible spirit of the good professor, the spirit of disciplined inquiry for the

truth and the enthusiasm to convey to his students the truth.

In many institutions teaching assistants are assigned to assist several different professors and thereby have the opportunity to observe and learn from several different models. Other institutions have more formal arrangements for teaching techniques. This is sometimes accomplished by discussion among a senior professor and several teaching assistants in a particular department on a seminar basis or on a large basis such as the field of social studies or indeed an overall college seminar series for teaching assistants. Another technique is the offering of formal courses in teaching techniques such as the courses in college teaching offered by Dr. Alice Hayden in the College of Education at the University of Washington and in the Graduate School at Ohio State University.

The young man or woman entering college teaching may have completed his program for the master's or doctorate degree or, because of financial stress or other reasons, may not have yet finished his formal academic preparation. In either case, there may exist certain gaps in his knowledge of subject matter or in his knowledge or practice of teaching techniques. Thus, for the teacher to function with maximum effectiveness, it is important that assistance be offered to him. One type of in-service assistance is the provision of orientation information to the young teacher to help him get started in his professional activity and to acquaint him with his institution, its organization, and its policies. Other in-service assistance activities may be provided later to try to insure improving effectiveness of the teacher, not only in his neophyte days, but also during his entire professional lifetime which may be as much as forty years from the time he enters college teaching.

To achieve in-service improvement of college teachers, the first requirement of course is that there be motivation to improve. We may assume that every teacher will himself strive to perform well in his field. However, it is the duty of the teacher's colleagues and of the institution administration to make clear to the teacher that good quality teaching and research and public service are expected from all members of the faculty and, in addition, are recognized and rewarded in due course by increases in salary and by promotion to higher ranks.

I am confused about all this talk of teaching

versus research. In institutions of higher learning, it is clear to me that *both* teaching and research are essential and good quality research production is essential to maintain continuing effectiveness in the college and university teacher. Some members of the faculty may be very much more active in research than others, but some research there should be.

Perhaps the best time for bringing to the attention of the college teacher the policies, organization, and procedures of his institution, and especially the high degree of importance placed by his institution on good quality teaching, is shortly after the arrival of the young teacher to take up his duties. Indeed, at this same time it is desirable that the young instructor be informed of whatever formal or informal opportunities the institution offers to him for evaluation and improvement of his teaching. In some institutions, a small booklet setting forth this kind of information is made available to new faculty persons. In other institutions, orientation seminars or lectures are provided.

In some colleges, rather elaborate systems are available for evaluation of teaching performance. Evaluations may be made by a variety of procedures, and by various groups, including the students of the class, the professors in the same department or field, the administrative officers, or even the alumni such as the case in part at Harvard University where visitors keep in touch with the individual departments. At the University of Washington, a system for evaluation of teaching was developed by Dean Edwin Guthrie quite a number of years ago. In general, this system functions successfully and continues to be in operation. The results obtained are important elements in consideration of increases in salary or rank by the members of the faculty.

Whether the student opinion system or another system is used for evaluation of teaching, it will of course be found that some college teachers perform substantially better in their teaching than others. If good performance is desired and obtained, then rewards are due. On the other hand, if it is found that poor teaching is being done, then assistance is indicated. The faculty member may attend formal lecture courses on methodology of teaching, psychology of learning, and on other aspects of college teaching. Instruction on techniques may also be developed in seminars or discussion groups.

Tutorial instruction of new teachers is an al-

ternative way. A "master teacher," who may be a senior colleague or the department head may function by friendly association with the new faculty person. He may sit in on lectures or seminar presentations by the faculty member and thereafter give informal and confidential advice to the young teacher. The use is now common of instructional aids such as graphs, charts, photographs, slides, movies, individual displays, and lecture demonstrations, and of course information on these possibilities may also be transmitted.

Between the limit of the formal lecture to faculty members on college teaching techniques, which is received favorably by many faculty persons, and the other limit of the individual master tutor, whose assistance may or may not be effective depending upon his particular personality and inclinations, there exists a middle course which is perhaps the most desirable one. According to this scheme, seminars are developed and attended by the faculty—and often teaching assistants also—within a given department, or a number of departments, and teaching methods or techniques are discussed in the context of rather specific subject matter.

The difficulties which may be experienced by the young college teacher, however, often arise not in a major fashion because of his shortcomings in technique, but because of his shortcomings in real understanding of the subject matter of his field. Although a graduate program carried through the master's degree and indeed through the doctor's degree, provides the new teacher with much understanding of his field, still when he faces the responsibility of planning an orderly course of study, and carrying through the specific preparations, presentations, discussions, recapitulations, and examinations, he may feel overwhelmed. And it often works out that his formal teaching responsibilities are heavy indeed.

Generally, however, if the new teacher's background is sound, he will within a short time steadily improve in effectiveness and confidence. This improvement will be accelerated if he is able to discuss this situation frequently with the head of his department or with one or more senior colleagues.

However, after the first pains are over, then the young college teacher must look about and become aware of the hazards of the forty-year-old

bulge. After the first year or two or three of getting started in his teaching situation, he may find himself so completely occupied with his teaching, his committee and his public service duties, and his family commitments, that he does not continue to grow!

It seems to me that the number one opportunity for in-service improvement of the college teacher lies in providing assistance and stimulation to the college teacher to grow steadily through the years in the mastery of his understanding and the maturity of his outlook. If his liberal arts undergraduate experience was a good one, and if his graduate work was soundly carried out, he will have developed effective habits of independent study and research which now will serve well to carry him safely over the forty-year bulge.

How can the college teacher be helped to maintain and improve his effectiveness? May I submit in review the following list of activities which occur to me: (1) **THE CHARGE AND MOTIVATION**—the specification by the faculty and institution that the college teacher is expected through the years to continue and indeed to improve his effectiveness and provision of rewards for good performance; (2) **CRITICAL REVIEWS AND DISCUSSION**—some arrangements for frequent interchanges of ideas and discussions among colleagues in the field—and I mean faculty luncheon discussions, weekly seminars, etc., for consideration of the results of personal research, of published research appearing in the literature of the field; (3) **GOOD LIBRARY AND LABORATORY FACILITIES**—obviously necessary for improving teaching effectiveness; (4) **VISITING SCHOLARS AND SCIENTISTS**—to engage in discussions and give seminars in association with the college teachers of subject matter or techniques; (5) **VISITS TO OTHER ACADEMIC INSTITUTIONS**—informal discussions or formal lectures or seminars or opportunity to continue graduate work to bring new views and stimulation.

Finally, we recognize that for continuing effectiveness neither the professional teacher role nor the professional scholar role must overshadow each other. Mastery of subject matter and research in a broad sense must be steadily maintained so that, through his lifetime, the teacher grows in his understanding and in his capacity to inspire students, and finally comes to be the really mature, wise, and effective college teacher.

The Student's Inquiring Mind



The author (Ph.D., Boston College) of the following article gives us a vital view of teaching-learning by inquiry. He is author of "American Democracy Challenged," a member of the National Historic Sites Commission, associate editor of the New England Teacher, and is a college professor and director of guidance.

By JOHN P. SULLIVAN

WHEN King Heiro assigned Archimedes the task of determining whether a votive crown fashioned by a smith of undisputed skill but of questionable integrity had been made of baser metals instead of solid gold, we had the setting for one of the most dramatic discoveries in history. The excited but totally naked Archimedes must have cut quite an unusual figure as he raced from the baths of Syracuse crying "Eureka." This point, however, need not detain us save to observe that the solution he had found was astounding in its simplicity: weigh the crown in water. Implied in this solution are elements of displacement and specific gravity. With these laws of hydrostatics we are not directly involved. Our real concern is how Archimedes gained his insight and solution to the composition of the crown. He said the answer came suddenly to him as a release from the tension of constant inquiry. A similar example of the questing mind is Galileo, founder of experimental physics. Man had always assumed a heavier object fell faster than a lighter one. That is, until Galileo bothered to ask, "Does it?" Whether we allude to the discovery of Archimedes or that of Galileo we are led to conclude that strokes of genius are but the outcome of a lasting habit or inquiry.

The Archimedes and Galileo tales have been told so often that while they spotlight the moment of discovery, they also give the impression that such moments are typical. The experienced teacher knows that "Eureka" moments are few and far between for the matured scholar; they are even less frequent for the aspiring student regardless of genius. The paucity of these creative insights

prompts the dedicated teacher to raise that frustrating query: How best may I direct my efforts toward developing the habit of constant inquiry in the gifted as well as the average and above average students?

There can be little quarrel that intelligent followers, as well as able leaders, are necessary to a successful democracy. Most educators recognize moreover that basic requirements for knowing are the same for the many as for the gifted few. The salient requirement is the inquiring mind oriented toward orderly knowing. Such knowing is a product of reflective understanding. Human experience tells us that understanding never results from brushing questions aside. To put it another way: During the thinking process a student suddenly pries loose a key factor. Something then clicks, and he zeroes in on that bright idea. It would have been impossible for him to pry loose that key factor in the first place unless he had begun by asking questions.

Plato named the question well when he called it the "Torpedo's Touch" for the very act of searching for answers by asking questions generates the act of learning. The question, thus, assumes critical importance in the dynamics of knowing. But a continuous habit of inquiry beyond the static posture of a single question is required to expand the horizons of the mind. We are left with the query as to the relationship of the question to the student's inquiring mind.

At the outset we ought to analyze the nature of a question. Webster says it is simply an act of asking or inquiring. Our concern, however, is with a different aspect. Instead of the pedagogical approach to our topic let us consider the deeper meaning of the question as it pertains to the student's intellectual development. Thus, for example, one may ask: Why is the political question so important to an election campaign? Behind the words of this query may be conceptual acts of meaning, such as "political question" and "election campaign." Behind the concepts may also be insights in which one grasps how to use these words. Presently, however, we are trying to get at something different. We want to know where the why comes from in the first instance. What does it reveal or represent? Earlier we mentioned the tension of constant inquiry that had its release in the joy of discovery. It is that tension,

that drive, that desire to understand, that constitutes the first why. Name it what you will: intelligent curiosity, spirit of inquiry, alertness of mind, the drive to know. Under any name it remains the same. This primordial drive is the pure question. It is prior to insights, concepts, words, for these have to do with answers. And before we look for answers, we want them: such wanting is the pure quest. It is the wonder that Aristotle claimed to be the beginning of all knowledge. But as Aristotle was quick to observe, no one just wonders; he wonders about something.

From the pure quest we move on to particulars and we discover that usable questions are of two types. There are those the student addresses to his intelligence. Such questions ask: what that means, how frequently it occurs, who is involved, why this is so? There are questions, also, for his reflection: Is it so? Does it? These ask whether answers to the former type of questions are correct. Some examples may illustrate the two types. It would be meaningless for the student to answer either "yes" or "no" to the question: What is the current farm policy? This question is for his intelligence, not for his reflection. The only proper answer is for him to show the answer. On the other hand, his "yes" or "no" reply is quite appropriate when he is asked: Is the current farm program workable?

What is significant here, and well worth the repetition, is that for every question addressed to the student's intelligence there is also a corresponding question for his reflection. For example, a student can ask what is the foreign policy of the United States in Latin America? He can also ask whether that foreign policy is operating efficiently. If he asks how bodies would fall in a vacuum, he can also ask whether any bodies fall in a vacuum. Generally, the definition of each term can be followed by the question for reflection. It asks whether the defined exists or occurs. Also, the enunciation of every law can be followed by the question for reflection. It asks whether the law is verified. Inversely, whenever one asserts verification of existence or occurrence, one may also be asked what is verified, what exists, what occurs.

A critical query arises when a student directs a question to his reflection. For example, at what moment does he get the answer when he asks: Is it so? He gets the answer at that moment when he grasps the virtually unconditioned in his reflective consciousness. And he gets the answer "yes" or "no." That is the moment he distin-

guishes fiction from fact, opinion from truth. The 'virtually unconditioned' may be explained in this way: Every human judgment depends on that situation when there are no further relevant questions. And one asks how you know when there are no further relevant questions. The answer: when there is a sufficient accumulation of insights. At that point you have acquired wisdom. We should expect this quality in our leaders. We sincerely hope it obtains in a segment of the student population. Absence of wisdom among our leaders and any number of our citizens could result in a state of intellectual chaos. This should challenge teachers to be on guard against intellectual training that encourages fuzzy thinking.

One limiting factor to the question technique should be noted. A student, for example, may possess an unrestricted desire to know more about the workings of his national government. But the desire is mated to his limited capacity to attain knowledge of his government. From this paradox there follow both a fact and a requirement. The fact is the student's range of possible questions is larger than his range of possible answers. The requirement is a critical survey of possible questions about his government. The survey can provide the student with intelligent and reasonable grounds for setting aside the questions that cannot be answered. It can furnish reasons for limiting his attention to the questions to which answers are possible.

At the outset we directed our thinking toward the inquiring mind. We aimed our sights at the question and its relationship to the student's intellectual development. We oriented our discussion around the thesis: Orderly thinking proceeds from the student's effort to raise and answer the right questions. The student engages in this inquiring process to attain to high levels of intelligence and critical judgment. He recognizes the need to operate at these high levels as essential to judicious decision-making. At this point it would be wise for all students to ponder well a footnote from history: When a person cannot or does not make up his own mind, events decide for him.

Perhaps each teacher should answer this simple quiz: Are my students learning to put the right queries to themselves and to me? Do I encourage them to proficiency in the use of the question as a tool for learning?

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The Academic Setting of the Dishonest Student



Two Hofstra College professors share further with us in this second installment their study of student cheating. Dr. Shirk (B.A., Wilson College; M.A., Ph.D., Columbia) is associate professor of philosophy, author or co-author of two books, and of articles and reviews. Dean Hoffmann (B.A., Middlebury College; M.A., Boston) is dean of students, has co-edited and co-authored books, served in the U. S. Navy, and contributed to journals.

By EVELYN SHIRK
R. W. HOFFMANN

WHENEVER the question of cheating arises on a campus, it is generally presumed to be exclusively a student problem. Students cheat; faculty deplore, investigate, censure. And in the role of proctor and judge, faculty place themselves securely on the side of the angels, emerging as Special Envoys of the Right, Preservers of Academic Protocol, and Dispensers of Justice.

But is faculty entirely absolved from responsibility for cheating and failure of student integrity? Cheating takes place in a classroom and a classroom is a species of social situation involving teacher, students, and subject matter in some very intricate communal relations. All parties in a situation contribute to its nature and share in its outcomes. A cheating class can hardly be just an aberrant phenomenon in a situation otherwise characterized by integrity. Its action can hardly be an isolated event in a process otherwise homogeneous. It must indeed reflect a cheating classroom atmosphere to which teacher as well as students have, in some sense, significantly, if unwittingly, contributed. The cheating classroom requires some succor from the teacher. Indeed, it might be argued that his contribution is primary since, as leader, his conception of himself, his role in relation to his students and to his subject matter very largely determine the dominant tone of group interaction. Both sides of the desk can

help prepare the stage for failure of group integrity.

This, however, does not imply that the teacher has the sole responsibility for such failure nor does it suggest that anyone is "responsible" in any sense for the sins of others. He, like his students, merely contributes to a situation which is not so much culpable as educationally ineffectual; not so much guilty as pathetic. There has always been the recognition that the teacher has some role in a cheating classroom even if that role has been misinterpreted to mean zealous proctoring and prompt appeal to "honor boards." Faculty have thereby recognized, if distortedly, some contribution to the cheating situation. But it delimits its role to the administration of justice. It too much takes for granted that the teacher can never contribute casually to the situation.

In order to examine possible faculty contributions to a cheating situation, let us turn to a group of attitudes and practices which might be called "metapedagogical" performances—attitudes which underlie the tripartite relation of teacher to himself as person, to his students as teacher, and to the subject matter which he "professes."

First, let us consider the culturally fostered attitude of the teacher toward himself as authority, as truth-bearer, and as a reservoir of unchallengeable information. As such, he sees his testimony as absolute, final, and irrevocable while that of the student is but relatively important, tentatively good, and chronically subject to error. While it certainly ought to be true that instructional comments are more skilled and informed than student ones, instructional views are none the less also tentative, revocable, and subject to improvement. Any other way of seeing the matter is false to the facts and inconsistent with the humility required of a scholar. It profanes the stance of inquiry which instruction necessitates by incorporating into it ego considerations and personal needs incompatible with it. This unfortunate split between the ideals of the investigator in the classroom and outside of it are indicated through many types of classroom procedures. For example, failure to dignify any and all questions, failure to consider any question worthy of attention regardless of how poorly expressed, threatening ridicule and loss of dignity to student challengers, all indicate that a dishonest attitude—

demonstrated if not expressed—has pervaded the learning situation. Both teacher and student have been cheated of the rights of sincere inquiry. And such attitudes effectively if mutely accumulate in the climate of a particular classroom.

Second, let us consider some attitudes of the teacher toward his students. There are those who pose a type of moral dichotomy between one side of the desk and the other in which the instructor presumes to represent the forces of light against the darkness of ignorance, laziness, and incompetence. The implied refusal to accompany the student on a journey of inquiry (but to lead him by his recalcitrant neck) is hardly consistent with the cooperative endeavor which is a classroom.

And it is in this garb of moral superiority that the teacher feels called upon to turn proctor—the class's first crusader against the moral contamination brought by students. As such he is in a very ineffectual position to aid in their battle (and perhaps his, as well) against competitive social pressures with which our entire social environment is beset. Aligning himself with the right against student delinquency, the instructor does battle AGAINST his students instead of *with* them. As proctor, he sets for himself alone the task of saving each and all from themselves. But as the *only* representative of the right he sets for himself a superhuman task in every sense of that term. He could hardly win even with an entire gestapo at his service. And in this fashion, both students and teacher are set to wasting their energies in opposing and threatening each other instead of joining forces to strengthen their mutual line against the many sided pressures of competitive success with which both are embattled.

Parenthetically, the instructor who hesitates to join the fray but persists in withdrawing into the role of proctor has apparently himself never had the opportunity to encounter the pressures to cheat in their full force and yet personally vanquished them. For until he himself has been personally acquainted with their power and until he himself, without the aid of police, proctors, or other restrainers, won the battle over his culture's weaknesses, he can hardly be expected to trust anyone else's potential integrity; he has not yet learned to trust his own. Only after he has won the battle for himself can he believe that anyone else might win it; only after he has experienced and conquered temptation can he release his proctoring grip on his class. The conviction that "there are always some cheaters in every class" is but a

projective way of testifying to untried and untrusted elements in one's own personality strongly moved by the fear of temptation and firmly checked only by the expedient of preventing others from tumbling into likely pitfalls. Indeed, how can we presume to know such facts about the nature of some individuals in a class in the absence of evidence?

Third, unannounced yet intrusive attitudes of a teacher regarding his subject matter as a discipline to which he gives service can also corrode the atmosphere of a classroom. Lackadaisical and undevoted pursuit of knowledge goes a long way in undermining student faith in the integrity of the instructor toward his chosen work. "By their fruits ye shall know them" is a patent classroom fact. Respectful concern for inquiry confers a value on its pursuit. Students directly experience, absorb, and fund those felt values and the dignity of a discipline is thereby acquired by its disciples. Personal dignity serves as a wall of protection against the self-destructive activity of cheating. The unspoken but nonetheless learned lesson that a student garners from an instructor who evidences disrespect for his discipline is that the teacher has falsely devoted his energies and professes that which he does not honor. Intimate experience of undedicated and unattached pursuit of knowledge is apt to give even the most hardy integrity reactive hiccups.

But perhaps the area most subject to corruption is that which encompasses the traditional techniques and formalities of the classroom. For example, the tacit but potent conviction that the student is totally defined by and hence reduced to his grades can contribute much to the pressures toward cheating. The all-too-threatening notion that the failing student is a failure and the passing one a success is another offender. False to the facts of personality, it eradicates individuality which requires as its condition that abilities, skills, and propensities vary in different dimensions and domains. A sum total of assets and liabilities defines a specific personality who is more than any one of its manifestations. And integrity is a property only of individual personality.

Another assumption lies in the notion that the grade itself is an adequate definition of intellectual performance. Education is a many-sided phenomenon of which the ability to retain and return the verbal exchange of the classroom is but one facet. It is presumptuous to overlook such considerations as depth of understanding, ability

to put knowledge to use, ability to see and delineate interrelationships between ideas and between one discipline and another, ability to express and explicate insights and to fruitfully use examples. Students subjected to such falsification are bound to sense a certain "unfairness" in the instructor and are tempted to offer an eye for an eye and a tooth for a tooth. At best a grade measures but one particular type of performance. To confuse the part with the whole is to cheat both student and the discipline he is trying to master. In short, if the teacher is to restore classroom integrity he must make clear his convictions regarding the merits and deficiencies of any grading system. Only this honest evaluation can help lessen the pressures that the idea of a "good grade" exerts on the student and which weaken him in his battle for integrity. The classroom conducive to honesty cannot consistently undervalue and underestimate the persons it hopes to develop. To employ methods and express attitudes which deprive individuals of autonomy and yet expect them to behave with integrity is to be grossly contradictory. And contradictory practice exhibits deceit. At the very least inquiry demands truth and investigation requires internal consistency. How can students avoid being confused when integrity is falsely asserted? How can they hope for victory in such a dishonest climate? The pressures are too great, the balance of power too finely drawn to withstand this added attack from the rear. Without strong reinforcements brought by a persistent integrity on the part of the instructor, the student is seriously threatened with defeat.

A subclass of offending attitudes with respect to grading in particular is to be found in defensive attitudes regarding the infallibility of the grade-giver. Insistence that grades need never be reviewed, that they are necessarily just and fair and not subject to error intrudes on the integrity of the classroom. Conviction of absoluteness is usually a means of evading the tax on both ability and energy which review of decisions requires. However, if time is granted to review an examination in order to exhibit excellent performance as well as typical error, the experience of how the material might best be handled is usually quite sufficient to satisfy students that conditions of integrity have been met. Indeed, there seems to be evidence that challenge of grades is more a test of the instructor's level of arbitrariness and authoritarian propensities than it is a challenge of a grade. If the instructor meets the challenge by an

ability to reconsider decisions, to reexplicate and review standards, he provides the student with the *experience of integrity* which is its own best weapon.

Of all the facets of classroom exchange and interaction, that which seems most susceptible to instructional dishonesty is the host of attitudes and practices regarding that particularly tempestuous situation of the giving and taking of an examination. Correlatively, in this area, student dishonesty is most frequent. In some classrooms most inappropriate conduct is evidenced in the ways in which examinations are announced, presented, and conducted. Some instructors cannot resist a desire to take the role of Jove. Exams are "thrown" like a bolt of lightning; they are "popped" as a trainer would a whip. Some teachers utilize exams to determine the worthy from the unworthy and to separate the sheep from the goats. Others use them in much the same way that a fisherman might use bait to hook the unsuspecting trout. They attempt to trick or otherwise "catch" the student, rendering him helpless and a victim of a joking prankster whose jokes are far from funny. The types of instructional performance which enshroud the exam proceedings with the secrecy of a mystical rite are further offenders. Unwillingness to announce an exam date, to suggest sample types of questions and to exhibit ways in which they might best be answered, to explain a term or to clarify a question surely give the lie to the classroom as a learning experience. Such behavior surely makes a farce of the conviction that the teacher should aid in exhibiting the way a particular discipline asks and answers questions. Instead, it gives the classroom more the character of a ritualistic ordeal which is both contrary to and discontinuous with instructional honesty. After all, an examination is a tentative (and very "unfinal") instrument for informing the student of his level of achievement and development.

If conditions conducive to personal integrity for all parties are to obtain, the conduct of exams requires, at the very least, greater student responsibility and participation. Let us suggest some ways. First, the class might be included in the decision to be tested; they might help select the date on which this is to happen; they might participate in delineating the areas on which they wish to be tested (which provides the instructor with an infallible guide regarding what areas are least understood and an opportunity to review

these.) A class might even participate in a decision to omit a test and abide by the grades thus far obtained. Surely nothing prevents student participation in formulating questions which might be used on an exam. Even reformulation or substitution of questions when the test is presented is not entirely out of order. Time permitting, it is often instructive to ask the group then and there to compose its own exam. It is even sound pedagogical policy to permit a group to try an exam and then decide if the grades should be discounted and another try undertaken. Perhaps there is no more effective adjunct to the learning process than to test one's powers under stress without having to hold the results irremediable. It can provide an exercise which outstrips hours of study in its power to teach.

Furthermore, to gain group agreement that any particular test is "fair" is especially conducive to integrity. To be given the honor of being asked reasserts the guiding principle that exams are but a tentative measure of achievement level and not an attack by the teacher on the student's ill-prepared corners. It reiterates the equal responsibility of teacher and class for the learning process and suggests that the exam itself is part of that process. Nor can these suggestions be understood as "techniques" to engender honesty. They are but manipulations of persons if they do not embody a conviction that the exam and its procedure is neither sacredly absolute nor an end in itself but a tentative, useful classroom instrument.

It will be noted that the suggested attitudes toward grading presume that exams should be of the so-called "essay" rather than "objective" type. It has been seriously argued that some subject matters might best be handled otherwise and that some cannot, in their very nature, be handled in this way at all. But issue can be taken with this position by even mathematicians and natural scientists. Regardless of how "factual" the material, facts have meaning, are selected on some basis, and are certified in some way. Even in mathematics "facts" are related to each other via theoretical considerations. An explanation of the nature of the "facts" and of the methods by which they are derived is required if the student is to understand what he is doing in the sciences as well as in the arts. Perhaps the notorious inefficiency of the teaching of mathematics and natural science is caused by insistence that mathematics and the natural sciences are sometimes felt

to be excluded from these requirements. Perhaps one of the failures of education in an age of techniques lies just in the conviction that one is adequately prepared when one can recognize a true statement from a false one; can select the right alternative when given a multiple choice, and can perform a mathematical operation without having to explain. Certain presumptions most surely follow in any case, namely, that the unqualified statement is desirable; that benefit can be derived from overlooking ambiguities rather than in detecting them; and that knowledge consists in either assertion or rejection.

Indeed, the so called "objective" exam is more conducive to a cheating situation than an essay type for several reasons quite apart from the greater mechanical facility for cheating which it provides. The very nomenclature of "essay" vs. "objective" testing suggests some underlying presuppositions of what knowledge is thought to be and how it is felt it might best be taught. In common parlance we usually oppose "objective" to "subjective." The implication is clear that the essay test is felt to be personally conceived and personally answered. This generally is taken to mean that it is "unfactual," "controversial," not subject to the categories of true and false, and hence ungradable by any reasonable standards. The "essay" type of question carries a title which presumes rather an artistic or literary effort and which therefore asks for only "opinions" which are too warmly personal to be verifiable and grounded. It might be noted, however, that there are opinions which are informed and those which are not, those which illuminate and interconnect facts and those which do not, those which are warranted by evidence and those which are not. Furthermore, some "opinions" are clearly presented, some are not; the implications of some opinions are understood and some are not; some opinions are useable and some are not. Hence, not only are "essay-type" exams eminently gradable but the grades reveal many dimensions of knowledge not encompassed by "objective" tests. The essay exam reveals the *particular* abilities and liabilities of each student. It reveals him as the "subject" indeed, rather than as object. It clarifies the nature of the person whom we try to educate. When the student becomes an "object," *his* personality, *his* understanding, and *his* development are in jeopardy and with them his integrity.

Let us consider some further contributions to

the cheating attitude which the objective exam fosters. First, the presupposition that so-called "facts" are all the student need know degrades him, belittles his potentialities, and provides him with less instruction than he requires. Second, the objective exam violates the subject matter by indicating a relationship between it and the teacher which at best lacks appreciation of its complexities and at worst lacks love. Third, it degrades the relationship between the instructor and the student by tacitly implying that the development of individuality and creativity is of little interest or importance. Finally, the very fact that objective exams can be machine graded reveals some notable implications, to wit, that the discipline could, as well, be machine taught; that the relationship between student and teacher is of minimal importance and at best a personal sentimentality out of keeping with efficient performance. It implies that student, teacher, and teaching process might more properly and efficiently be automatized, mechanized, stylized, and stereotyped. What could be more conducive to the failure of personal integrity than the hidden implications that the person receives his knowledge as would a machine? For indeed, in recording, storing, returning, and even utilizing "data," the machine outstrips a human being a thousandfold. And inasmuch as integrity is a property of persons, the most basic condition for its presence, namely the person, is annihilated.

Needless to say, one of the pedagogical concomitants of the "essay" type exam is the requirement that the class be clear regarding its errors and deficiencies. To refuse to review the exam is unfaithful to its meaning in the learning situation. And to review an exam requires minimally that it be carefully read. If nothing else is contributed to his education by this procedure, the student is at least made aware of the respect with which he and his efforts are taken. Conditions for self-respect are thereby strengthened. And while such procedures take time and tax the instructor's ability as well as his energy, the nurture of the growth and development of a human being warrants it.

But even a classroom conducive in every way to an atmosphere of integrity can lose the struggle for self on which personal integrity depends.

Even exemplary conditions do not guarantee that cheating will not occur. A classroom is a social situation. It mirrors in miniature the society in which it exists. General social loss of self-respect and personal dignity creep into all of its procedures. Those individuals whose "marketing personalities"¹ made them but a collection of attributes to be sold on the job market and those whose self-love and self-respect are thereby reduced to a minimum form part of the college group. The "criminaloid"² who break laws in spirit if not in fact, who express a widespread social destructiveness and disdain for law, are also part of the student body. In a very real sense, the student is a victim of his society. The cheating attitude toward self and others is a common social problem against which any classroom counter-attack is pathetically inefficient. But a pitched battle for personal dignity and integrity in the classroom is not thereby totally ineffectual. It can provide the student with his very first experience at being treated with dignity—his first free hand in the making of personal responsibility—his first encounter with authority on the basis of equality and his first real effort at shaping his own destiny. And if we are to be consistent with the contention that personal integrity depends on the development of persons to whom that integrity can accrue, the fact of failure in a particular classroom is of relatively little importance. Nor is what society at large is or does of much concern compared to what the few students we encounter are and do. Our concern is with the particular persons who come to us for education and with their personal battle for self-respect. The responsibility of the teacher lies in revealing those social and personal stresses, in explaining their operation to the student and in relieving rather than contributing to their force. Without the instructor on his side, the student is weakened. He may easily lose. Even with the instructor as powerful ally, he may yet lose. But even in defeat, neither student nor instructor will so easily forget the glimpse of self-respect and other-respect—the basis of integrity—which such classrooms can provide.

¹ Erich Fromm, *Man for Himself* (New York: Rhinehart and Company, 1947)

² Leon Saul, *The Hostile Mind* (New York: Random House, 1956)

Whither the College Student?

and adjustments are compactly viewed in this tightly written report. As the student goes on in college his curricular choices, changing outside activities, and interests are studied. Self-appraisal as well as college appraisal of the student is reported. There are answers to the question, why the student went to college, as well as, what he finally achieved. Wherever material is pertinent and data available, comparisons are made with the national norm in that area, viz. student withdrawals.

While most of the students agreed that "the college had helped to prepare them for future vocational or educational goals to which they looked forward with eager anticipation," the report contains many frank admissions of failure and biting judgments: "... student attitudes were discredited by their own contemporaries ... Their excessive preoccupation with grades was attacked and attributed to their misunderstanding of the true nature of scholarship, *learning for the sake of learning.*"

Too much concentration on grades is frequently alluded to. The author scores the lack of a student sense of responsibility for developing his intellect and talents, and integrity of judgment in the use of knowledge: "Their choice of courses was frequently dominated by an intense interest in the importance of grades rather than by thought-provoking content. Even in scholastically superior students, there was evident a streak of opportunism and deference to grades as a means of achieving their goals."

The all too important statistic of grades comes up in a conclusion of the study that "withdrawals come overwhelmingly from low scholarship students and from the lower echelons of those admitted." This fact, however, does not stand alone. There is the illuminating exception which must give the educator pause:

... The lowest high school average (79%) had been obtained by one of the most outstanding members of the class, a veteran who was honored with membership in both Phi Beta Kappa and Sigma Xi. ... His adjustment to his studies was made difficult by the unusual lapse of time between high school and college and by his low entrance average (79%) which probably indicated poor study habits ... With the growth of self-realization he learned to solve his problems and developed into a "brilliant scientist" with "philosophic insight" ...

One student problem which appears to have been quite common had to do with reading habits:



Should "quo vadis?" oftener be asked of our students? Aren't we interested in where they are going? If they seem often not to know or care, aren't we concerned? A charter member of the faculty of Brooklyn College (A.B., Hunter College; M.A., Ph.D.,

Columbia) reports on the significant research of a colleague, one of many articles and reviews she has contributed to periodicals. She was the first apprentice-director of the American Shakespeare Festival Theater, is author of "History of Speech Education at Columbia College 1754-1940," and is currently a visiting research fellow at Radcliffe College.

By HELEN ROACH

IN LITERATURE about the current college crisis, it is refreshing to come upon the data packed *Brooklyn College, Class Portrait, 1953-1957*.¹ It is not as the title might suggest, a portrait of merely local interest. Professor Jeanette Eilenberg, the author, concludes that ... "In this picture not the differences or uniqueness of the Brooklyn College student stand out but his basic similarity to his college contemporaries, taken across the land."

The study is a milestone in the history of higher education in this country because for the first time "an evaluating study of the social and scholastic development of a college class following the students through their whole college career" has been undertaken. Its timeliness is obvious.

Painstakingly pursued, through routine interviews, registrar's records, personnel folders, and very carefully planned final interviews, the data concern 369 men and 489 women of the class which entered Brooklyn College in January 1953 and left some 3½ to 4½ years later. It is marked by the spirit of warm dedication and maturity of preparation of the author, now for some years a teacher and assistant to the dean of faculty.

The backgrounds of the students, their interests and diversions, freshman year difficulties

¹ Brooklyn College Bookstore, Brooklyn 10, N. Y. 71 pp. \$1.67.

"Few of the students become accustomed to spending part of their leisure time in reading anything except best sellers and periodicals." "The respondents themselves attributed the deterioration of their reading habits to the great amount of reading assigned in courses and to the outside employment which took up most of their spare time . . . they had good intentions and expressed the hope that after graduation, time would permit them to read the many books that they had always intended to read . . ."

There is a record of confusion in student values in the report that "At the end of the sophomore year 60% of the students were working part-time during the school year . . . instructors willing to give their time to conferences with these students all too frequently get such responses as: 'But I am sorry, I can't meet with you. I must be at my job . . .'" "Even students whose economic status did not require them to seek outside employment seemed impelled to do so. For these, holding a position presented a challenge they were anxious to meet, their opportunity to come in contact with the outside world, and savor growing sense of independence and self-fulfillment."

Science students "felt that their studies and their laboratory work had trained them well in logical and critical thinking, that they had learned to assume responsibility and to work independently through carrying out their assignments. However, most of them read hardly anything that was not related to their field of study. In the whole group, there was also a general feeling among the students that they had not been adequately trained to express themselves in writing.

They regretted that this had not been stressed more frequently in courses outside of the English Department."

In a more positive vein some students reported:

The courses they would remember longest and with the greatest enthusiasm were those in which they had been guided into applying their own critical powers to the material that had been presented to them by the instructor . . . but . . . most of them believed that large classes and lecture courses precluded the development of critical thinking . . .

From the pedagogue's side of the desk comes such an expression of concern as: "Not once but often teachers (if they are conscientious and thoughtful enough) face with a heavy heart not the 'flunker' but the glib facile 'A' student . . . To these might be added those students who in reaction against superficiality, dig deeply into their own course of study, flaunt assignments, and in the end fail to qualify for admission to the graduate schools of their choice, although intellectually and culturally richer than the facile 'A's.'"

Of course, all teachers are not conscientious and thoughtful and so one student mourns: "I suppose there will never be a return to the time when all teachers taught because they loved learning and teaching. But I believe it is not too much to expect that those who teach show more enthusiasm for teaching and caring whether students learn."

The college teacher is one of the areas sparsely but provocatively illuminated in this Class Portrait. No one knows better than Professor Eilenberg that much more of her report should be expanded into an absorbing book.

Autumn Issue

The next issue will complete the ninth year of this journal. It will round out the following impressive totals for the journal to date: 270 articles, 54 editorials, 51 reviews, in addition to annotated listings of 242 books and 114 filler quotations. Articles in the Autumn Issue will be by Francesco Cordasco, Fairleigh-Dickinson University; Walter J. DeMordaunt, New Mexico State University; E. D. Duryea, Hofstra College; William J. Gnagey, Manchester College; Hugh Hartig, Eastern Oregon College; Frederick Mayer, University of Redlands; LeRoy C. Olsen, Washington State University; Marvin A. Rapp, State University of New York; E. V. Pullias, University of Southern California; Thomas P. Sullivan, Mount Angel College; Evelyn Shirk and Randall W. Hoffman, Hofstra College; Ordway Tead and probably others.

The Reunification of the University

THE IDEA OF THE UNIVERSITY by Karl Jaspers. Boston, Massachusetts: Beacon Press. 1961. xxi + 135 pp. \$3.75.

A Review by ORDWAY TEAD

THIS BOOK, if it could be widely read among higher educational practitioners, might gradually have a profound salutary effect upon our badly confused philosophy of college and university education. But unfortunately it may be that because it is written from the author's life-long experience in continental European universities it may not gain the immediate attention which it should. In which case we will still need American scholars to state a similar theme with more local connotations.

The central concern here is with the need for recognizing the unity or relatedness of all knowledge. For example, he says flatly (and in agreement with Whitehead), "The university must always meet the needs of the practical occupations. . . . But it adds something totally new when it meets these needs by way of defining their place within the whole of knowledge."

And again, "The reunification of the university, which stems from an awareness of the cosmos of the sciences, cannot simply mean restoring things to their mediaeval unity. The whole context of modern knowledge and research must be integrated: broadening the scope of the university must initiate a genuine unification of all branches of learning."

He warns further that "Suspension of value judgments may degenerate into mere neutralist indifference; suspension of practical action, into laziness; intellectual caution into neurotic fear of any challenge to enfeebled energies."

His delineation of ways and means is highly generalized but it is suggestive, inspiring, and challenging. In its sweep and integrity it leaves the reader eager to apply these truths in his own institution with obvious American adaptations. That is its basic value and urgent relevancy.

I call the special attention of the readers of this journal to Chapter IV, "Research, Education, and Instruction" in one of the many epigrammatic sentences of which he says, "Respect for the intellectually first-rate must provide all with an incentive to exert themselves to the utmost of their abilities."

I recommend as a stimulating experience a wide reading of this book by college teachers and administrative leaders. It should lead to a raising of sights and a quickening of the truth-seeking commitment. Emeritus Professor Robert Ulich of the Harvard Graduate School of Education in an admirable Preface concludes: "Only if this struggle will be valiantly fought and expressed can higher education and the democratic society find the sources of continual inner re-creation and heightened productivity."

Era of Explosions

EDUCATION FOR THE EMERGING AGE by Theodore Brameld. New York: Harper & Brothers. 1961. vii + 244 pp. \$5.00.

ABOUT ALL THAT CAN BE SAID with certainty about the future is that it will be different. We know this because of the swiftness of revolutionary change that is occurring before our eyes. A man who wrote a forward looking book ten years ago has been impelled now to publish a sequel composed of some chapters repeated from the earlier book, some revised and enlarged, many new. Education, he says, requires the fullest use of "all resources of the sciences of man." Though many of these resources, still very incomplete, were embryonic a decade ago, now, "thanks to the research of science such as psychiatry and anthropology, we are beginning to reformulate our whole conception of the educative process."

Our time demands wise thinking and bold action:

. . . a new era of explosions has dawned—an era ominous in its forebodings that the same thermonuclear blasts which first discharged the earth into the planetary system will be utilized for mutilation if not liquidation of the very life forms that these energies bred. . . . Yet . . . our age is equally one of breath-taking expectations—expectations, not only of man's first impending adventures into mysterious regions beyond our planet, but of reconstructions upon its surface that may well reach heights of spiritual as well as material abundance unprecedented in the annals of man's struggle for existence.

Though global if not cosmic in its range, the book does not neglect the college classroom as the dynamic center for the "newer ends and stronger means" an emerging age demands. Our college

teaching, he points out, is too commonly not good enough. In the first place, it disregards new knowledge about teaching itself:

Much of the poorest teaching occurs on the college level (the over-weighted lecture method is still the commonest practice), a consequence in no small part due to the supercilious disregard by liberal-arts faculties of the recent, remarkable advances by educational experimenters in more effective ways of teaching and learning—group dynamics being but one example.

In a second place, we hold back our profession by keeping to the common misconception that teaching quality is a function of scholarship in one's specialty:

Where liberal-arts critics are the furthest from being right is in their naive assumption that teaching is something almost anyone can do if he knows his subject well enough. This assumption is just as absurd as to suppose that a physician is qualified to remove an appendix because he is well grounded in the subject of anatomy. One consequence is that, while no surgeon would be permitted to perform an operation without a good deal of preliminary directed practice, teachers, especially on the college level (many of them in the liberal arts), are permitted to operate upon and often to damage the sensitive human organisms in their charge with no directed practice whatsoever. That some of them are nevertheless excellent teachers proves nothing: they are excellent in spite of their training. The fact is that many others are also extremely poor, as almost any graduate of a typical liberal-arts college could testify. Yet it is those who are sometimes the most vocal in their contempt for modern methodologies of learning and teaching.

The sharpest departure of the new book from the former one is found in attention to "the newer ends and stronger means heralded by the beginnings of a partnership between anthropology (among other behavioral sciences), philosophy, and education." The author deals with this partnership in part on a basis of direct study of enculturation phenomena in Puerto Rico, "a microcosm from which we may learn much that is applicable to the cultures and subcultures, of, say, the microcosm of Rhode Island."

He deals with his great theme with courage, discernment, and sustained competence. All of us should read it. We are asking, or should be asking, the questions and seeking the answers that our critical age demands. For example: "Is it possible, desirable, or both, to create *designs for the needed earth-wide culture?*" The author concludes "that democratic happiness is worth fighting to achieve." He propounds "a philosophy of education at once appropriate to our present age and directed toward the *future* of democracy."

Many readers will get some jolts as the author

sharply opposes the views of many distinguished proponents of what he regards as inadequate or erroneous ideas and practices. If we will but read in the same spirit of urbanity and sincerity as that in which he writes, we should be able to profit from having some misconceptions disturbed or from discovering that influential men may have imposed some fallacies upon us. DMG

Other New Books

THE ANALYSIS OF BEHAVIOR by James G. Holland and B. F. Skinner. New York: McGraw-Hill Book Company, Inc. 1961. x + 337 pp. \$3.50.

This paper volume is a "teaching machine." It embodies "a program for self instruction" and includes prefatory statements to the instructor and the student.

CREATIVE UNIVERSITIES by Frederick Mayer. New York: College and University Press. 1961. 111 pp.

Creative thinking on concept of creative universities. Significance and quality of the nine chapters are shown by the portions of the book being published in this and the next issue of this journal. Preface by Lawrence G. Derthick: "Embodying a philosophy and a high ideal of service."

FACULTY HANDBOOKS IN CALIFORNIA PUBLIC JUNIOR COLLEGES by Frederick C. Kintzer. Los Angeles, California: University of California Junior College Leadership Program. Occasional Report Number 1. April 1961. 25 pp. For sale by UCLA Student Store. \$1.00. A modest paper pamphlet that shows careful preparation and should be full of suggestion for handbooks intended for faculties of all colleges and universities.

FORMS AND FORCES IN UNIVERSITY ADULT EDUCATION by James T. Carey. Chicago: Center for the Study of Liberal Education for Adults. 1961. vii + 229 pp. \$3.00.

"Designed as an exercise in policy research implying an explicit view of desirable directions in the field of university adult education."

HIGHER EDUCATION IN THE UNITED STATES: THE ECONOMIC PROBLEMS, edited with an Introduction by Seymour E. Harris. Cambridge, Massachusetts: Harvard University Press. 1960. 252 pp. \$5.50.

Attractively presented papers of a Ford Foundation sponsored seminar at Harvard including 9 by college presidents; 6 by vice presidents, provosts, and deans; 6 by treasurers; 23 by federal or state office of education officers, foundation officers, College Entrance Examination Board officers, economists and other social scientists, an undergraduate, and others. There were more than one hundred in attendance. There is much information here of interest to the college and university professor.

HOW TO STUDY AND TAKE EXAMS by Lincoln Pettit. New York: John F. Rider Publisher, Inc. 1960. vi + 81 pp. \$1.00.

The author of this paper book regards it as a bit more of a rationale than most books of its kind. It

lays a foundation for relating education to the American scene today. It is truly a book on how to study, practical and with many special elements. The subtitle "The proven scientific method" is not the author's, but users can accept it if they will. The impact of the book goes beyond mere fact mastery. It motivates study by challenging considerations of critical thinking and philosophy of life.

INTERNATIONAL EDUCATION IN PHYSICS, edited by Sanborn C. Brown and Norman Clarke. Cambridge, Massachusetts: The Technology Press, Massachusetts Institute of Technology. New York: John Wiley & Sons, Inc. Joint Publishers. 1960. xvi + 191 pp. \$4.50. Proceedings of the International Conference on Physics Education, UNESCO House, Paris, August 4, 1960, attended by delegates from twenty-eight countries. Place of Physics in education, teaching and training of teachers of Physics and Mathematics.

INTRODUCTORY ECONOMICS by Norman F. Keiser. New York: John Wiley & Sons. xiii + 545 pp. \$6.50. The meaning of Economics, what shall be produced and how shall we produce it, how shall the goods be exchanged, how can we maintain production, who gets what share of the pie, international trade and comparative economic organization. Many graphs and attractive pictures.

LETTERS TO MY TEACHER by Dagobert D. Runes. New York: Philosophical Library, Inc. 1961. 105 pp. \$2.75. Eighteen letters to the author's former teacher in Austria in the days of the Empire but dealing with issues of today. There is no suggestion that all is right with the world. Quite the contrary. But each letter is a gem of clear thinking and wisdom.

MEASUREMENT AND EVALUATION IN PSYCHOLOGY AND EDUCATION by Robret L. Thorndike and Elizabeth Hagen. New York: John Wiley & Sons, Inc. viii + 602 pp. \$7.25.

A second edition. Historical and philosophical orientation, measurement methods, teacher's own tests, preparing objective tests, standards, techniques, planning a testing program—eighteen chapters in all with tables, graphs, and an appendix.

PROFESSIONAL MANPOWER AND EDUCATION IN COMMUNIST CHINA by Leo A. Orleans. Washington, D. C.: National Science Foundation. 1961. xii + 260 pp. \$2.00.

The author is senior research analyst, Library of Congress. This is a report on Communist Chinese professional manpower and education showing that country geared to meet immediate technological demands, its education undergoing rapid change and expansion, and its development as a major industrial power handicapped by its population problem. Comprehensive and the concrete data give the reader a sense of familiarity with the situation as though the bamboo curtain for a time had been parted.

SCANDINAVIAN STUDENTS ON AN AMERICAN CAMPUS by Wm. H. Sewell and Oluf M. Davidsen. Minneapolis: University of Minnesota Press. 1961. ix + 134 pp. \$3.50.

Sponsored by the Committee on Cross-Cultural Educa-

tion of the Social Science Research Council, the study explored the academic and social adjustment processes and outcomes of foreign study, focusing intensively on forty Scandinavian students who were attending the University of Wisconsin 1952-54.

STUDENT PERSONNEL SERVICES IN COLLEGES AND UNIVERSITIES by E. G. Williamson. Some Foundations, Techniques, and Processes of Program Administration. New York: McGraw-Hill Book Company. 1961. xiv + 474 pp. \$7.50.

Not a "how-to-do" handbook but nonetheless concerned with the processes of day-to-day operation and management of services to "student clientele." Three parts, the third being "New Services and Policies: Illustrative Cases."

STUDIES IN HONOR OF ULLMAN, edited by Lillian B. Lawler, Dorothy M. Robathan, William C. Korfmacher. St. Louis: The Classical Bulletin, St. Louis University. 1960. xxv + 151 pp. \$4.00.

In tribute to a professor on his retirement as head of the department of classics at The University of North Carolina, twenty-two scholars have contributed papers of varying length and theme. In addition to biographical sketch and bibliography the contributors range from "Signandi Ius in the Charter of the Provincial Assembly of Narbonensis" by J. A. O. Larsen of The University of Chicago, to "Vesta Unveiled" by Norman DeWitt of Victoria College, Toronto, to "Shakespeare and Plutarch—Differences" by Hardin Craig of The University of Missouri, to "Retrospective Yearnings" by Henry D. Ephron of Montana State University. As epilogue an oratio in Latin by William C. Korfmacher is included.

THE TEACHING OF ELEMENTARY ECONOMICS, edited by Kenyon A. Knoff and James H. Stauss. New York: Holt, Rinehart and Winston, Inc. xi + 269 pp. \$3.50.

This volume is the result of a conference of college and university teachers of Economics held at the Merrill Center for Economics at Grinnell College. It deals with objectives and methods in general, case approach, problem orientation, increased responsibility of students for their own education, workshop, pedagogy, macro-economics and micro-economics teaching experiments, visual aids, broad issues in teaching of principles.

THOSE WHO TRANSFER by F. Faith Finnberg. Minneapolis: University of Minnesota, General College. 1960. Mimeographed, paper. No charge.

A study of the achievement of General College students who transferred to other colleges from the University of Minnesota 1951-1956. "The length of time required by these students to complete work on their four-year degrees compares favorably with figures available for degree students in other contexts."

USING TELEVISION IN THE CLASSROOM, edited by Mary Howard Smith. New York: McGraw-Hill Book Company, Inc. 1961. xiv + 118 pp. \$2.95.

Eight years ago there was only one educational television station in the nation; there are now 51. This book introduces the classroom teacher to television, discusses the teacher's role, and in part three presents demonstrations of instructional television in use.

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